EFFECTIVENESS OF SELECTED NURSING INTERVENTION ON IDENTIFICATION OF LEARNING DISABILITY AMONG TEACHERS

DISSERTATION SUBMITTED TO

THE TAMIL NADU DR.M.G.R.MEDICAL UNIVERSITY

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A QUASI EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF SELECTED NURSING INTERVENTIONS ON KNOWLEDGE AND ATTITUDE REGARDING THE IDENTIFICATION OF LEARNING DISABILITY AMONG TEACHERS AT SELECTED SCHOOLS, AVADI, CHENNAI, 2010-11

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ABSTRACT

Children are gift from the god. They are born with the ability and capacity to learn. Children learn the complex system of the world with astonishing speed more than one can think of. Every individual is unique and there are some individuals who by virtue of their physical and mental abilities require a more relevant (or) appropriate instruction that is usually available.

Education of disabled children has basic concepts and goals in common with the education of all children and this is where teachers play an important role. The teachers need to attend to the individual differences, need and with the provision of special services to the unnoticed, unserved and ignored population.

A study was conducted to assess the effectiveness of selected nursing intervention on knowledge and attitude regarding identification of learning disability among teachers at selected schools, Avadi, Chennai, 2010-2011.

The objective of the study was to assess the knowledge and attitude of teachers in experimental and control group with selected demographic variables. The study was conducted by adopting quasi experimental design and 60 teachers (30 experimental and 30 control group) who fulfilled the inclusion criteria were selected by using non probability purposive sampling technique. The conceptual framework adopted was based on Wiedenbach's helping are nursing theory.

In this study structured questionnaire and modified 3-point Likert scale were used to assess the knowledge and attitude of teachers. Pretest revealed that 20 teachers had inadequate, 10 teachers had moderately adequate knowledge. Regarding attitude 9 teachers had unfavorable, 19 had moderately favorable, 2 had favorable attitude. After selected nursing intervention (lecture cum discussion, standardized checklist, booklet) a posttest was done which showed a significant increase in the level of knowledge and attitude which was statistically shown by 19 teachers with moderately adequate, 11 teachers with adequate knowledge. Similarly in attitude a favorable improvement was seen with 14 teachers with moderately favorable and 16 teachers with favorable attitude.

And thus these methods of early identification followed by intervention will help the teachers to identify children with learning disability which in turn help to produce children who will be a great citizen in the future.

CHAPTER – I

INTRODUCTION

"Education is an all round drawing out of the best in child and man-body, mind and spirit."

Mahatma Gandhi.

Children are gift from the god. They are born with the ability and capacity to learn. Children learn the complex system of the world with astonishing speed more than one can think of. Education promotes all round development of the child which unites the soul, the body and the mind of an individual and helps in transmitting of entire values. Education is increasingly being perceived as capable of modifying the economic scenario and transforming the dreams of millions of human beings for a better and higher quality of life into a reality. It is an effective system resulting in the development of a learner's potential, competency, interest, attitudes and values.

In the past, this potential education right was denied for the disabled children. The National Policy on Education (1986) has made a significant contribution towards developing educational opportunity for the disabled children. The scheme of Integrated Education for the Disabled (IED) children, sponsored by the center is geared to realize the educational opportunities for these children.

Every individual is unique and hence special education should bound to cater to the needs of all individuals in compliance with the constitutional provision of equal opportunity. There are some individuals who by virtue of their physical and mental abilities require a more relevant or appropriate instruction than is usually available within formal and informal educational structures. A large number of children have problem in learning which is preventing them from assuming full advantage of education and reaching their whole educational and productive potential. They suffer from a group of disorders collectively known as learning disability.

In the 1980s, the National Joint Committee on Learning Disabilities (NJCLD) defined the term learning disability as

"a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities. These disorders are intrinsic to the individual and presumed to be due to central nervous system dysfunction. Even though a learning disability may occur concomitantly with other handicapping conditions (e.g. sensory impairment, mental retardation, social and emotional disturbance) or environmental influences (e.g. cultural differences, insufficient/inappropriate instruction, psychogenic factors) it is not the direct result of those conditions or influences."

Education of disabled children has basic concepts and goals in common with the education of all children. And this is where teachers play an important role in any education system. She is an artist who mould and shapes the physical, intellectual and moral powers of the children. The responsibility of the teacher working in integrated schools and normal school is more when she/he is involved in dealing children with disabled children apart from the normal children.

Educational equality is not merely providing education in the same class with normal children in the same instruction format. It demands attention to the individual's uniqueness, needs and the provision of special services to meet those needs. Teaching is not just confined to curriculum and instruction. It also involves managing the classroom, motivating the child to learn and meeting the needs of the children.

In India there are schools for special children like visually impaired, hearing impaired, mentally retarded and orthopaedically handicapped. Apart from the above, in normal schools there are children with mild and moderate disabilities. These disabilities are unnoticed, unserved and ignored. Until and unless such childrens' needs are met either in regular classrooms (or) special classroom within the school, we cannot fulfil the aim of Universalization of Elementary Education and Equalization of Educational Opportunity to All. And hence there is an urgent need to equip the existing and the upcoming teachers on different aspects of dealing children with disabled children.

And thus teachers with good knowledge and attitude for the concept of disabilities will do better justice to the students with disabilities.

BACKGROUND OF THE STUDY

Learning disability used to be known as mental handicap, but the degree of disability can vary sizeably. Some children will never learn to speak and even when they grow up, they need help to look after themselves for feeding, dressing or going to the toilet. On the other hand, the disability may be mild and the child will grow up to become independent.

According to WHO (1997) the prevalence of learning disability is close to 3%. Individual's with mild disability represent the largest population of 2.5% of the whole population, moderate intellectual disability involves approximately 0.4% of the population and severe and profound levels combined account for approximately 0.1%.

30 – 50% of the population has undiagnosed learning disabilities according to National Institute for Literacy.

According to 23rd annual report to congress, U.S Department of education as many as 1 out of every 5 people in the U.S. have learning disability. Almost 3 million children aged between 6 to 21 years have some form of a learning disability and receive special education in school.

In U.S., 2.9 million school-age children aged between 6 to 21 years, of which 5% of all school-going children in public schools are classified as having specific learning disabilities and receive some kind of special education support. These numbers do not include children in private and religious schools or home-schooled children.

Since 1992, the percentage of students who spend 80% or more of their time in school in special education classes has increased from 21% to 45%.

51% of students receiving special education services through the public schools are identified as having learning disabilities.

Specific learning disabilities have increased 22% over the past 25 years. In the past decade, the number of students aged between 6 to 21 years identified with specific learning disabilities has increased by 38%. 1% of white children and 2.6% of Non-Hispanic black children were receiving learning disability related special educational services.

44% of parents who noticed their child exhibiting signs of difficulty with learning waited a year or more before acknowledging that their child might have a serious problem.

35% of children with learning disabilities drop out of high school. This is twice the rate of students without learning disability. Of those who do graduate, less than 2% attend a four-year college, despite the fact that many are above average in intelligence. Only 13% of students with learning disabilities (compared to 53% of students in general population) have attended a 4-year post-secondary school program within two years of leaving high school. Approximately 85% of all individuals with learning disabilities have difficulties in the area of reading.

In England there are 1.2 million people with mild or moderate disability, 65,000 children and young people have severe or profound learning disability.

In India 13-14% of school children suffer from learning disability. In a school of say 4000, atleast 100 children could be dyslexic. An estimated population of 30 million is known to be dyslexic in India.

Information about special learning disability occurring in Indian children is scanty. The incident of dyslexia in primary school children in India has been reported to be 2-18%, of which 14% dysgraphia and 5.5% dyscalculia.

N.C.P.E.D.P (National Center for promotion of employment for disabled people) recently conducted a survey on the education scenario for students with disabilities. The summary of the research study was supported by Amici Di Raoul Follereau (AIFO).

		Status of mainstream education of disabled students in India							
Top 10 schools									
Name of school	**Total students**			**Number of disabled students**					
	Male	Female	**Total**	Male	%	Female	%	**Total**	%
Springdales School	541	1231	**1772**	34	6.28	32	2.6	**66**	3.72
Vasant Valley School	676	656	**1332**	29	4.29	14	2.13	**43**	3.23
Kendriya Vidyalaya, Donimalai	512	476	**988**	21	4.1	8	1.68	**29**	2.94
Bishop Cotton School	685	15	**700**	20	2.92	0	0	**20**	2.86
St.John's Higher Secondary School	336	326	**662**	8	2.38	7	2.15	**15**	2.27
Government Senior Secondary School, Una	253	260	**513**	6	2.37	4	1.54	**10**	1.95
Government T. H. School	277	212	**489**	4	1.44	3	1.42	**7**	1.43
Jawahar Navodaya Vidyalaya, Bidar	333	162	**495**	6	1.8	1	0.62	**7**	1.41
Karimpuzha Higher Secondary school	793	715	**1508**	20	2.52	0	0	**20**	1.33
Government Senior Secondary School	400	59	**459**	5	1.25	1	1.69	**6**	1.31

The sample comprised 10 schools from each State and 5 from each Union Territory. A total of 318 schools were contacted across the country. 89 schools (28%) responded, 229 schools (72%) did not bother to fill up the questionnaire, probably due to indifference or because they did not have anything to report.

In the 89 respondent schools, only 382 students with disabilities were enrolled. A mere 0.51% of the student population consisted of disabled students, again negligible as far as the 3% reservation by the law is concerned.

Out of the 89 respondent schools, 34 schools (38%) did not have a single disabled student. However, only 18 schools (20%) admitted clearly that the school does not admit students with disabilities. An equal number (20%) of respondent schools were not aware of The Disability Act, 1995. Lack of trained staff, lack of infrastructure again adds to the inadequacy of proper facilities at schools. However, these schools were certainly not equipped to meet the higher educational needs of disabled children.

SIGNIFICANCE AND NEED OF THE STUDY

Childhood is a time for fun and pleasure. Learning is considered to be a part of fun and pleasure meant for children. However, some children have difficulties in learning and their teachers, parents and school authorities try hard to ascertain the reasons behind the same.

Parents and teachers, who are unaware of learning disability, may label the otherwise bright and creative child, as lazy and disinterested. Even in cities, schools are hostile towards learning disability at large, and are ignorant about characteristic features and specific academic difficulties. The lack of necessary facilities for identification, along with delay in referral and remediation results in severe damage to their self esteem and motivation to studying leading to a vicious cycle of academic, emotional and behavioral problems.

It is estimated that 15-20% of students of every school are struggling to perform. Teacher's blame that either the child is careless or that parent are not giving attention to them at home. The present problem needs to be studied in more depth to find out whether the children who are under- performing are conditioned by the teachers that it's a learning disability. It is a small effort to make aware that teachers and the institutions need to train themselves to handle this problem rather labeling, commenting and complaining that they "Should do better, Can't sit still, The class clown, Rebellious, Not trying and Dumb."

Parents instinctively know there is a problem, but do not know how to solve it.

Recent studies suggest that more boys are identified as learning disabled, than girls (Andresse, 1985).

The studies suggest that as many boys may have the condition but are not identified (Shaywitz and Fletcher, 1995).

Students with learning disabilities are usually identified by the time they reach late Third or early Fourth grade.

IQ's of identified learning disability students are typically in the 90-95 range.

Students with learning disability are not socially acceptable as other students when rated by their peers and teachers (Bender, 2001).

As many as 50% students with learning disability will drop out of school prior to high school graduation (Levin, Zigmond, and Birch, 1985).

Students with learning disability are more likely to encounter trouble with the law (Keilitz and Dunivant, 1986).

Sheila Saravanabhavan (2010) studied the knowledge level of learning disabilities among teachers in India. A survey was distributed among 144 teachers in two regular high school, 38 teachers in two special school and 165 pre-service teachers in Virginia. One-way analysis variance (ANOVA) was used pre-service teachers scored the lowest M=60.76, SD 13.36, N=165 which was below the mean score of entire group (M=66.32, SD=13.37, N=347). The study made recommendations on how to improve the knowledge level of learning disabilities among pre-service teachers in India, and the need to assess knowledge of learning disability among parents, educational administrators and other stake holders.

Fatemah Arabsolghar (2010) examined the view of teachers and parents in regard to memory skills in children with learning difficulties. A questionnaire was given on memory strategy and metamemory was given to teachers and parents of children with learning disability in years 3, 5, 7 in public school Brisbane. The study showed that teachers and parents knew best strategy. But the study still supported to the need for continued emphasis on cognition and metacognition in teachers training program and more assistance to parents to overcome learning disability.

Jessica Whitley (2010) explored the relationship between teacher's characteristics and the academic behavior of students with or without learning disability in a path model. Data were drawn from Canadian National Longitudinal Survey of Children and Youth. Students included in the study were in grade I to Sixth who were taught by single teacher N=2367. Results proved that the teachers felt less confident in their prowess to instruct students with learning disability.

Lisette Hornstra, et al., (2010) examined teachers attitude toward dyslexia and the effects of these attitudes on teacher's expectations and the academic achievement of students compared to children without disability. The samples were 30 regular education teachers whose attitude were determined using implicit, explicit and self-report measure. The result showed the implicit attitude measures to be a more valuable predictor of the achievement of students with dyslexia.

Chhabra, S.,Srivastava (2010) studied attitude towards students with disabilities. The purpose of the study was to identify the perception and the attitude of the teachers towards inclusion of students with disabilities in the classroom. The study concluded that teachers in Botswana have a negative attitude towards inclusion education and having children with disabilities in their classroom. Significant correlation was noticed between attitudes and concerns.

Diane Haager (2010) conducted a performance based reading assessment for students at risk for reading–related learning disabilities using the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) in Colorado. Students at-risk were given supplemental small-group reading instruction. The final result showed that at risk students showed steady improvement supporting the coupling of an inclusive special education program with reading intervention in primary grades. And teachers report indicated that professional development should be founded in the reality of the classroom experience.

Jeanne Wanzek (2009) compared three students with severe reading disabilities who participated in three year intervention program provided by the trained tutors from first grade. All three students' demonstrated very low response in the initial level. The findings at last showed one student had accelerated growth considerably during third grade and also made accelerated progress towards goal level expectations.

Tami Craft Al- Hazza (2008) in the study included one hundred and fifty-one full time teachers in a four day professional development workshop on primary teacher's knowledge and knowledge calibration of early literacy program. Participants were administered three part survey based on demographic information, knowledge calibration on phonic and phonics pretest. The result and discussion addressed the importance of knowledge calibration to develop progress educational experience for new and experienced teachers.

Marilyn M.Irving and Mildred Nti (2007) observed the knowledge and preparation of teachers with students with special needs in the science classroom. One-hundred-and-twenty secondary science teachers responded to a survey entitled "Teaching Science to Students with Special Needs in Inclusive Setting". Result of the survey revealed that the teachers needed support on various instructional methodologies to be more effective in teaching science to special learners.

Hala Elhoweris and Negmeldin Alsheikh (2006) UAE, where the purpose of the study was to investigate the current attitude of teachers and explore possible differences in the general and special education teachers. A total of 10 participants from mid-western state participated who were in-service teachers enrolled in regular classes. The finding indicated that teachers had positive attitude, but there were some difference between attitude of special and educational teachers.

Samir Dalwai and Deepti Kanade (2003) investigated the knowledge awareness and sensitivity about learning disability among parents, teachers, school management and counselors. Among teachers 52% had no awareness, 37% had minimal awareness, and 11% had adequate awareness. And the study brings to light the existing lack facilities, ignorance and indifferent attitude towards children with learning disability.

Learning disability is not indicative of intelligence level. Rather, people with a learning disability have trouble performing specific types of skills or completing tasks if left to figure things out by themselves or if taught in conventional ways. A learning disability cannot be cured or fixed. Individuals with learning disabilities can face unique challenges that are often pervasive throughout the lifespan. Depending on the type and severity of the disability, interventions may be used to help the individual learn strategies

that will foster future success. Some interventions can be quite simple, while others are intricate and complex. Teachers and parents will be a part of the intervention in terms of how they aid the individual in successfully completing different tasks.

A teacher's role is indispensable in moulding the students in any educational system. To accomplish this task effectively teacher must be competent and has to exhibit various skills. The multiple skills that are to exhibited by them require specific competencies. A teacher with kindness, patience and positive attitude will be an asset to the special education field. Intensive training and education helps her to perform the diversified task more effectively. And thus children with disabilities can be identified at an early stage for early intervention.

As it is a growing field, the strong base should be laid down. And as a first step the present awareness, attitude and possessed competencies have to be assessed. School psychologists quite often help to design the intervention and coordinate the execution of the intervention with teachers and parents. Social support can be a crucial component for students with learning disabilities in the school system and should not be overlooked in the intervention plan. With the right support and intervention, people with learning disabilities can succeed in school and can be successful later in life.

These studies motivated the investigator to do a quasi experimental study on assessing the effectiveness of selected nursing intervention on knowledge and attitude regarding identification of learning disability among teachers.

TITLE

Effectiveness of selected nursing interventions on identification of learning disability among teachers.

STATEMENT OF THE PROBLEM

A quasi experimental study to assess the effectiveness of selected nursing interventions on knowledge and attitude regarding the identification of learning disability among teachers at selected schools, Avadi, Chennai, 2010-2011.

OBJECTIVES

1. To assess the pre-test level of knowledge and attitude regarding the identification of learning disability among teachers in experimental group and control group.
2. To assess the effectiveness of post-test level of knowledge and attitude regarding the identification of learning disability among teachers in experimental and control group.
3. To compare the effectiveness of selected nursing interventions on level of knowledge and attitude regarding the identification of learning disability among teachers.
4. To associate the post-test level of knowledge and attitude with the selected demographic variables in experimental and control group.

VARIBLES OF THE STUDY

Independent Variable

Selected nursing intervention.

Dependent Variable

Knowledge and attitude.

Demographic Variables

Age, gender, qualification, years of experience, group, any personal experience on identification of children with learning disability and parents teacher's association member.

OPERATIONAL DEFINITION

Effectiveness

It refers to the outcome of the education program regarding identification of learning disability among teachers, which will be evaluated based on pre and post knowledge and attitude test, by using structured questionnaire and modified 3- point Likert scale.

Selected Nursing Interventions

In this study it refers to activities lecture cum discussion, use standardized checklist, booklet organized by the investigator in order to improve the knowledge and attitude regarding the identification of learning disability among teachers.

Knowledge

It refers to the outcome of information gained regarding identification of learning disability by teachers as measured by the structured questionnaire.

Attitude

It refers to the change in the opinion or the feelings of teachers regarding measures to prevent disability among children as measured by modified 3-point Likert scale.

Learning Disability

It refers to a disorder that affects children's ability to interpret what they see and hear, which leads to difficulties that extent to school work and can affect reading, writing and to do mathematics.

Teachers

It includes teachers who are involved in the teaching program of that school.

Selected School

It refers to CBSE, English medium school having section from L.K.G-10th standard where children aged between 4-10 years are selected.

ASSUMPTIONS

1. Teachers may have some knowledge regarding learning disability.
2. Teachers receiving selected intervention may have enhanced knowledge than those teachers who do not.
3. Adequate knowledge regarding learning disability may promote favorable attitude among teachers.

NULL HYPOTHESIS

H_{01}- There is no significant difference in the level of knowledge and attitude of teachers who have been administered with selected nursing intervention and those who have not.

DELIMITATIONS

1. The study was delimited to a period of 4 weeks.
2. The study was delimited to teachers from L.K.G to 5^{th} standard.
3. The study was delimited to selected setting in Chennai.

PROJECTED OUTCOME

1. The study may enable the teachers to improve their knowledge and attitude in identification of children with learning disability.
2. Application of study findings will help teachers to identify children with learning disability.

SUMMARY

This study dealt with the background of the study, significance and need of the study, title, statement of the problem, objectives, variables of the study, null hypothesis, operational definition, assumptions, delimitations, projected outcome and organization of the report.

ORGANIZATION OF THE STUDY

The following chapter contains

CHAPTER II - Review of literature and conceptual framework

CHAPTER III - Methodology

CHAPTER IV - Data analysis and interpretation

CHAPTER V - Discussion

CHAPTER VI - Summary and recommendations

This is followed by reference and appendices.

CHAPTER – II

REVIEW OF LITERATURE

Review of literature is a systematic search of published work to gain information about a research topic (Polit & Hungler, 2006). Conducting a review of literature is challenging and enlightening experience. Through the literature review, researcher generates a picture of what is known about a particular situation and the knowledge gap that exists between the problem statement and the research subject problem and lays a broad foundation for the study and a conceptual framework to proceed with the study under the following heading.

PART – I: LITERATURE REVIEW

Section A: Literature on learning disability.

Section B: Literature on teacher's knowledge towards children with learning disability.

Section C: Literature on teacher's attitude towards children with learning disability.

Section D: Literature on intervention towards children with learning disability.

PART-II: CONCEPTUAL FRAME WORK

SECTION A: LITERATURE ON LEARNING DISABILITY

Stanley D. Espinda (2009) conducted a diagnostic color vision screening in 11 of 18 classrooms for educationally handicapped (EH) and in an equivalent number of regular classrooms in California. Deficient color vision was found in 13.25% of educationally handicapped and 5.04% of regular class students. The difference was significant at $p<.05$. Color vision deficiency was significantly associated with observable behavioral patterns considered inimical to classroom learning was confirmed.

Jonathan Litt et al., (2008) examined achievement, neuropsychological and intervention outcomes at mean age of 11 years in children with very low birth weight and compared with term- born control group in Cleveland. Participants included 31 children with less than 750 g birth weight, 41 with 750-1499g birth weight and 52 controls. Findings suggested that children with extremely low birth weight without gross physical

or intellectual impairments are at higher risk for learning disability and cognitive deficiencies than term-born group.

Gary W. Mauk (1992) stated that in recent years there has been an increase in concern about identification of and provision of appropriate services to children with hearing impairments and learning disabilities. Result from limited survey research on students with multiple disabilities provides evidence that such group exists and significant in school-age population. For children with hearing loss, the preschool period offers a prime opportunity to identify an education plan to be implemented.

Gostason, et al., (1991) found chromosomal aberration in 19.2% of a sample of 57 people with mild learning disability compared with 1.9% of controls, Northern Ireland. It may be that mild disability was because of genetic defects 46 Xdup (X) chromosome was identified which can be passed from generation to generation. The study concluded that genetic testing for individuals with learning disability is worthwhile even when there may be only a low index of suspicion.

SECTION B: LITERATURE ON KNOWLEDGE OF TEACHERS TOWARDS CHILDREN WITH LEARNING DISABILITY

Adolf SM Catts (2010) did multiple studies on phonological awareness and alphabet knowledge. Participants included 433 children involved in a longitudinal study of language and reading development. The kindergarten test battery assessed various language skills in 2^{nd} and 8^{th} grade. Result showed reading impairment in both grades and suggested changing nature of reading comprehension over time.

Lee Swanson (2010) summarized a comprehensive synthesis of experimental intervention studies that have included students with learning disabilities. Effect sizes for 180 intervention studies were analyzed. The mean effect of instructional intervention was positive of high magnitude M=0.79. The results are supportive of the pervasive influence of cognitive strategy and direct instruction models for re-mediating the academic difficulties for children with learning disabilities.

Hairul Nizam Ismail (2009) the purpose of this study was to measure the effect of a training module in improving knowledge competencies for resource room teachers in Jordan. Samples were 50 teachers, 25 in experimental and 25 in control group. Result of ANCOVA revealed that there was statistically significant difference between the mean of 2 groups on post-achievement test favoring experimental group.

Diana L. Greer (2009) carried out a study on special education teacher education: A perspective on content knowledge. The standard-based approach promugulated by curriculum and state assessment is central to the accountability of condition in today's schools. Building on five years of experience in developing testing the blending assessment with instruction program in mathematics, where three basic principles essential in ensuring achievement, with learning disability (1) instruction must be aligned with curriculum standards (2) translating curriculum standards into aligned instruction (3) instructional methodology preparation.

Askin Asan (2007) the purpose of the research project was to determine the effects of incorporating concept mapping on the achievement of fifth grade students in science class. The study was conducted with twenty-three students at an elementary school Turkey. The students were tested with format prepared by teachers. After pretest the control group was given traditional oral view and experimental group exposed to computer based concept mapping tool. Test score were analyzed and found concept mapping had a noticeable impact on student achievement in science class.

Debora G. Boeck and Glen G. Foster (2006) studied the effectiveness of learning disabilities inservice program. In the study forty-three regular classroom teachers were provided with four, one-hour inservice session. Twenty-four control subjects did not participate, but did complete dependent measure. Pre and posttest administration of the learning disabilities information inventory were utilized. Analysis of covariance was done, which showed an increase in knowledge of learning disabilities among experimental group than control group.

John Kessell (2006) assessed students-teachers knowledge of the individuals with disabilities education act. The sample was 335 whose mean score for the total correct response to the knowledge assessment was 57%. Agricultural teachers who were unaware

of special education law and or issues that may impact their local program requested inservice workshops, materials, for teachers who have experience in teaching special need population.

Jamal M. Al.Khatib (2007) investigated Jordanian regular education teachers' knowledge of learning disabilities. Sample consisted of 405 regular classroom teachers. Teachers completed 40-item test. T-test for independent samples and ANOVA were used to analyze the survey data. Result reveled teachers had moderate level of knowledge, female teachers were found to be significantly more knowledge than male. And teacher's level of knowledge was unrelated to teacher's age, teaching experience (or) academic qualification.

Kataoka (2004) did his research study on the principal's and teacher's perception of learning disability. The samples were 128 principals and 123 teachers in Japan. Analysis revealed the following factors like changes in the family and social situation, insufficient knowledge and support for learning disability, teacher's abilities and professional development, teachers' situation and government issues. Teachers mainly agreed on the factor of insufficient knowledge of and support of student's learning disability.

McCutchen .D and Abbott RD (2002) studied the importance of phonological awareness. The experimental group and control group were assessed for a year, assessing teachers classroom practices and their students (n=79) learning. The study yielded at teachers own knowledge of the role of phonological and orthographic awareness information can be deepened, teachers can use this knowledge to change classroom practice, and this change can improve student learning.

SECTION C: LITERATURE RELATED TO ATTITUDES OF TEACHERS TOWARDS LEARNING DISABILITY

Alghira Alahbabi (2009) investigated special and general education teachers attitudes towards the inclusion of students with special needs in general education classes in the UAE. The sample included 900 teachers who were compared based on two criteria: teacher type special (or) general education teacher and grade level (kindergarten, elementary, middle and high school). The Scale of Teachers Attitudes Towards Inclusive Classrooms (STATIC) was used to assess attitude. The result indicated the special

education teachers have significantly positive attitude towards inclusion than general education teachers and elementary teachers were the most willing to accommodate students with special needs in general educational settings.

Genevieve M. Johnson (2009) examined changes in pre-service teacher attitude towards contemporary issues in education were assessed in 124 students enrolled in second – year educational psychology course. Comparison of pre and post – course Likert rating indicated a modified attitude regarding grade retention, inclusive education, classroom management and this attitude is amenable to change in a relatively brief time.

Sonia.Ijaz Haider (2008) explored on classroom teachers attitude towards inclusion of students with special educational needs in mainstream classroom and collaboration between the classroom and special education teachers in Pakistan. Fifty mainstream classroom teachers (48 women two men) and fifty special education teachers (47 women three men) from four schools of Lahore participated in the study. Result showed teachers have positive attitude towards inclusive education. The findings showed that collaboration between mainstream and special education teachers are important.

Efrosini Kalya and Dina Gojkovie (2007) studied the attitude of 72 Serbian teachers towards inclusion of children with Special Education Needs (SEN) in mainstream schools, with My Thinking About Inclusion Scale Questionnaire. MANCOVA analysis showed that Serbian teachers showed negative attitude towards inclusion of children with special education needs.

UZI Brook and Nathan Watemberg (1999) investigated teacher's knowledge and attitude towards learning disability among high school teachers. Forty-six high school teachers were interviewed. They were divided into 2 groups: 25 teachers taught at special educational school (School 1) and 21 teachers taught at special education school (School 2). The result showed 74% had relatively low knowledge about learning disability and attitude score was relatively 72.5% and 30% considered learning disability to be result of parental attitudes namely "spoiling" the children.

SECTION D: LITERATURE ON INTERVENTION TOWARDS CHILDREN WITH LEARNING DISABILITY

Eric Dion (2010) considered imperative to introduce reading instruction as early as possible to prevent reading problem among low-income students. By assigning group of kindergarten (N=256) to two condition. In the first teacher-implemented research based intervention was implemented during kindergarten and first grade. In the second only first grade intervention was implemented. Analyses were conducted for students not at risk, at low risk and high-risk students. Kindergarten intervention was highly effective for low and high risk students, but it is only latter group early gains translated into better reading skills at the end of first grade and not-at-risk students did not benefit.

Taranjit Kaur (2008) tested the comparative efficacy of various strategies on basic mathematical skill in LD children in Chandigarh. LD children were randomly assigned to multimedia, cognitive, eclectic, and control condition. Pre and posttest administration of children with specific learning disabilities was assessed with Arithmetic Scale and the test showed significantly enhanced mathematical skill in LD children.

Soukup and Feinstein.S (2007) U.S.A conducted a study to ascertain methods of identification used by teachers of the deaf and hard of hearing who were working with learning disability students. A 10-item survey in four-state region of the Midwest was done. The survey showed that 50% respondents did not feel adequately prepared to teach deaf and hard of hearing students with learning disability. Teachers expressed a desire for more training in identification, assessment and intervention.

O'Connor RE (2006) measured the effects of increasing levels of intervention in reading for cohort of children in Grades K through 3 to determine whether the severity of reading disabilities (RD) could be significantly reduced in the catchment school. Tier 1 consisted of professional development for teachers reading. Tier 2-small-group reading instruction three times a week. Tier 3- daily instruction delivery individually (or) in groups of two. The result kindergarten showed moderate to large difference favoring children in the tiered intervention in decoding, word identification, and fluency and reading comprehension.

PART – II

CONCEPTUAL FRAMEWORK

Conceptual models are made up of concepts which describe the mental images of phenomena and integrate them into a meaningful configuration. The conceptual framework gives the idea to the researcher main view and more theme of the research. It is the visual diagram by which the researcher explains specific area of interest. The model adapted for the study is modified from the Wiedenbach's Helping Art of Clinical Nursing Theory.

Investigator adopted this model and perceived it as apt in enabling to access the effectiveness of selected nursing intervention on knowledge and attitude regarding the identification of learning disability among teachers.

According to Wiedenbach's the practice of nursing comprises a wide variety of services each directed towards the attainment of one of its three components.

STEP 1: IDENTIFICATION OF NEED FOR HELP

The components are:

General information

This comprises of demographic variables such as age, gender, qualification, years of experience, group, any personal experience on identification of children with learning disability and parent teacher's association member.

Central Purpose

It refers to what the investigator wants to accomplish. Here the central purpose is to improve the level of knowledge and attitude regarding identification of learning disability among school teachers.

STEP II: MINISTERING THE NEEDED HELP

Prescription

It refers to the plan of care, the nature of action that will fulfill the central purpose.

Here the prescription is giving selected nursing intervention.

Intervention

It refers to the selected nursing intervention (lecture cum discussion, standardized checklist, and booklet) to the experimental group.

STEP III: VALIDATING THAT NEEDED HELP WAS MET:

It is validated that the needed help was delivered in achieving the central purpose. The step involves the post assessment done after ministering the help and comparison analysis to infer the outcome. This approach thereby enables the researcher to make suitable decision and recommended action to continue or drop or modify the nursing action. Here it's the comparison of pre and post assessment level of knowledge and attitude among school teachers.

Reality

The realities are the immediate situation that influences the fulfillment of central purposes. A nurse should consider the reality of situation in which she is to provide nursing care.

Wiedenbach's defines the five realities.

The agent

The person who is providing care to her delegates characterized by personal attributes, problem commitment and competence in nursing. Here it is the investigator.

The recipient

The recipient is the patient who is characterized by the personal attributes, problems, capacities, aspirations and ability to cope with the concern or problems being experienced. Here it is the school teachers.

The Goal

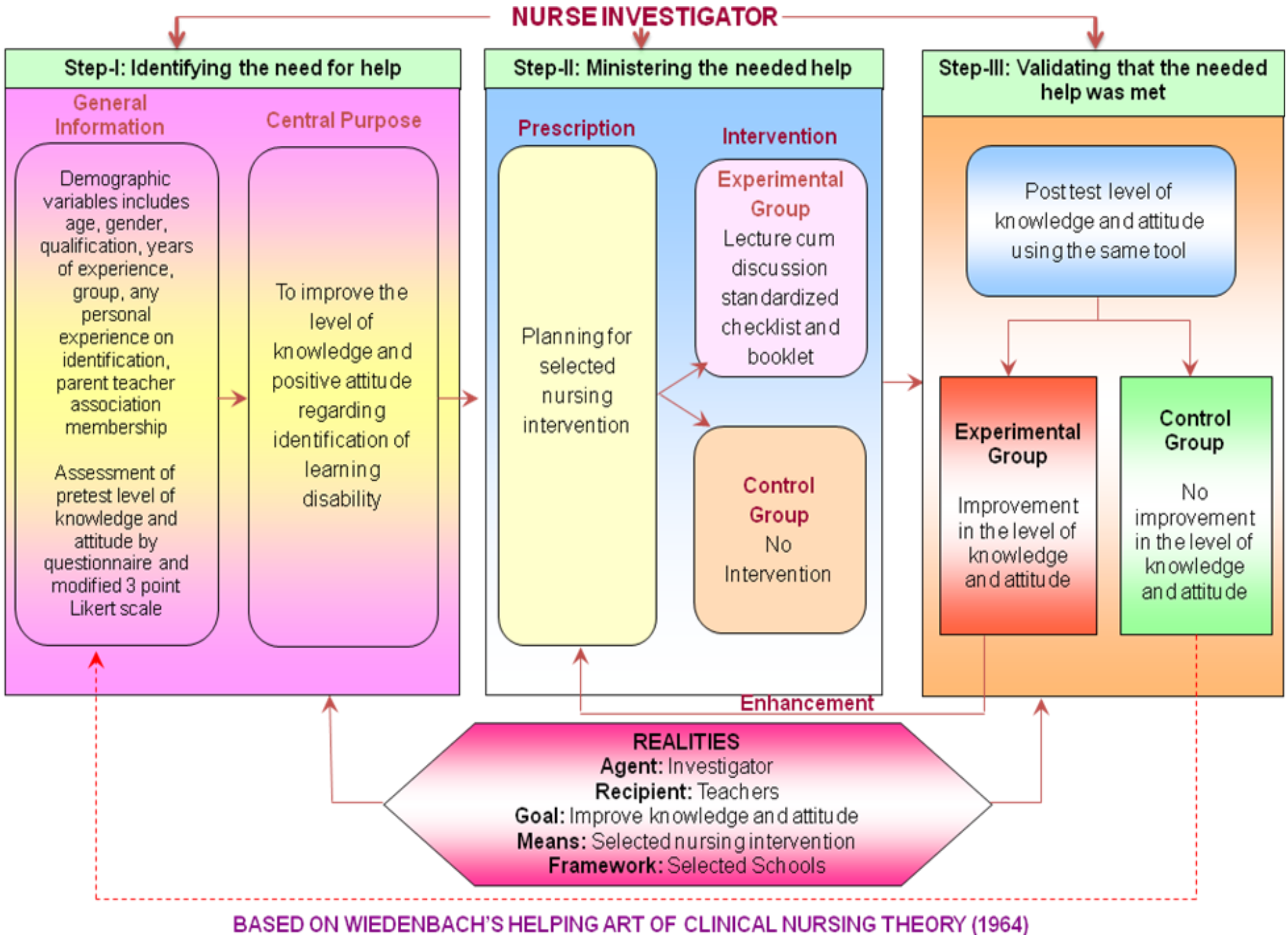
Is the defined outcome the nurse wishes to achieve. Here it is to improve the level of knowledge and attitude regarding identification of learning disability among school teachers.

The Means

Comprises the activities and devices through which the practitioner attains the goal. The means include skills, technique, procedures and devices that may be used to facilitate nursing practice. Here it is giving lecture cum discussion, use of standardized checklist and booklet to the experimental group.

The framework

Consists of human, environment, professional, organization facilities that not only make up the context which nursing practices but also constitutes the currently existing limits. Here it is Kendriya Vidyalaya and Ordinance clothing factory school.


NURSE INVESTIGATOR
Step-I: Identifying the need for help
General Information
Demographic variables includes age, gender, qualification, years of experience, group, any personal experience on identification, parent teacher association membership
Assessment of pretest level of knowledge and attitude by questionnaire and modified 3 point Likert scale
Central Purpose
To improve the level of knowledge and positive attitude regarding identification of learning disability
Step-II: Ministering the needed help
Prescription
Planning for selected nursing intervention
Intervention
Experimental Group
Lecture cum discussion standardized checklist and booklet
Control Group
No Intervention
Step-III: Validating that the needed help was met
Post test level of knowledge and attitude using the same tool
Experimental Group
Improvement in the level of knowledge and attitude
Control Group
No improvement in the level of knowledge and attitude
Enhancement
REALITIES
Agent: Investigator
Recipient: Teachers
Goal: Improve knowledge and attitude
Means: Selected nursing intervention
Framework: Selected Schools
BASED ON WIEDENBACH'S HELPING ART OF CLINICAL NURSING THEORY (1964)

CHAPTER – III

RESEARCH METHODOLOGY

Research methodology is a way to solve the research problem systematically. And this chapter describes the research methodology followed to evaluate the effectiveness of selected nursing intervention on knowledge and attitude regarding identification of learning disability among teachers at selected school, Chennai 2010-2011.

It deals with the research approach, research design, setting of the study, population, criteria for sample selection, sample size, sampling technique, development and description of the tool for data collection, content validity, pilot study, procedure for data collection and statistical analysis.

RESEARCH APPROACH

The research approach used by the investigator to assess the level of knowledge and attitude was an evaluative approach.

RESEARCH DESIGN

The investigator has chosen the quasi experimental design to find the effectiveness of selected nursing intervention on identification of children with learning disability among teachers. This chapter describes the research methodology followed to evaluate the effectiveness of selected nursing intervention on identification of learning disability among teachers at Avadi, Chennai, 2010 – 2011.

The effectiveness diagrammatically shown as:

Group	Pre-test O_1	Treatment X	Post-test O_2
Experimental group	Assessment of existing level of knowledge and attitude regarding identification of learning disability by questionnaire and modified 3-point Likert scale.	Selected nursing intervention lecture cum discussion, standardized checklist, and booklet.	Assessment of posttest level knowledge and attitude regarding identification of learning disability by questionnaire and modified 3-point Likert scale.
Control group	Assessment of existing level of knowledge and attitude of learning disability by questionnaire and modified 3-point Likert scale.	No intervention.	Assessment of posttest level of knowledge and attitude regarding identification of learning disability by questionnaire and modified 3-point Likert scale.

VARIABLES

Independent Variable

Selected nursing intervention.

Dependent Variable

Knowledge and attitude.

Demographic Variables

Age, gender, qualification, years of experience, group, any personal experience and parent teacher association member.

RESEARCH SETTING

The study was conducted in CBSE, English medium school, Chennai. It is six kilometers away from Vel R. S. Medical College – College of Nursing Chennai. Two schools were taken for the study. Ordinance Clothing Factory School was taken as the experimental group and Kendriya Vidhyala Ordinance Clothing Factory School was taken as control group. Nearly 960 students are being trained in O.C.F school with total teacher's strength of 68 out of which 450 students and 44 teachers were from L.K.G to 5^{th} standard. In the Control Group, K.V.O.C.F has nearly 1300 students with total teacher's strength of 74 out of which 600 students and 48 teachers were from L.K.G to 5^{th} standard.

POPULATION

Population refers to the entire aggregation of cases that meets designed criteria. Here it refers to entire school teachers dealing with children and it is important to make distinction between target and accessible population.

Target Population

Target population of the study comprised of all school teachers from L.K.G to 5^{th} standard.

Accessible Population

Accessible population of the study comprised of all school teachers working in Ordinance Clothing Factory School and Kendriya Vidyalaya Ordinance Clothing Factory School.

SAMPLE

Sample of the study comprised of teachers who fulfilled the inclusion criteria in O.C.F and K.V.O.C.F school, Avadi, Chennai.

SAMPLE SIZE

The study sample comprised of 30 teachers as experimental and 30 teachers as control group who fulfilled the inclusion criteria.

SAMPLING TECHNIQUE

Non-probability purposive sampling technique was used to evaluate the effectiveness of selected nursing intervention among teachers.

CRITERIA FOR SAMPLE SELECTION

Inclusion Criteria

1) Teachers from L.K.G to 5^{th} standard.
2) Teachers who were willing to participate.
3) Teachers who were present on the day of the study.

Exclusion Criteria

1) Teachers who were not willing to participate.
2) Teachers who already underwent program on learning disability.

METHODS OF DEVELOPING THE TOOL

The tool was designed after extensive review of literature. This tool comprised of questionnaire related to knowledge and attitude on different aspects of learning disability. The tool was considered for its appropriateness by experts.

DESCRIPTION OF THE TOOL

The tool used for the data collection had the following sections

SECTION A:

DEMOGRAPHIC ASSESSMENT

It deals with demographic variables such as age, gender, qualification, years of experience, group, any personal experience on identification of children with learning disability and parent teacher association member.

SECTION B: Assessment of the level of knowledge regarding identification of learning disability

The investigator developed a questionnaire to assess the knowledge regarding identification of learning disability among teachers. It consists of 30 multiple choice questions. Each right answer carries one mark.

The section includes about learning disability-concept, causes, identification and assessment, characteristics, social-emotional changes, general intervention included psycho-social supports.

Scoring Key

Score		**Level of Knowledge**
<50%	-	Inadequate knowledge
50-75%	-	Moderately adequate knowledge
>75%	-	Adequate knowledge

SECTION C: Assessment of the level of attitude.

The investigator developed modified 3-point Likert scale. It comprises of 20 items with 3 points. Ten negatively worded statements and 10 positively worded statements. Reverse score done for negatively coded statements. Maximum score-60, Minimum score-10.

Attitude	**Agree**	**Not Sure**	**Disagree**
Positive	3	2	1
Negative	1	2	3

Interpretation

<50% - Unfavorable attitude

50-75% - Moderately favorable attitude

>75% - Favorable attitude.

VALIDITY OF THE TOOL

The content of the tool was validated by one Pediatrician, one clinical psychologist and three child health nursing experts. The expert's suggestions were incorporated and the tool was finalized and used by the investigator for the main study.

RELIABILITY OF THE TOOL

The reliability of the tool to assess the level of knowledge was established by test retest method. The score was r=0.9, and the reliability of Likert's scale was established by split half method r = 0.91 which indicates highly positive correlation. Hence the tool was considered as reliable.

ETHICAL CONSIDERATIONS

Ethical considerations refer to a system of moral values that is concerned with the degree to which research procedure adheres to professional, legal and social obligations to study participants.

The study was conducted after the approval of Dissertation Committee. The formal consent was taken from Principal of O.C.F and K.V.O.C.F. school at Avadi before proceeding with the study. The teachers were clearly explained about the study purpose and written consent was obtained. It was assured to the teachers that the result would be kept confidential.

PILOT STUDY PROCEDURE

The pilot study is a trial run for main study. The refined tools were used for pilot study to test feasibility and practicality. After getting formal permission the pilot study was conducted during the period of 26.4.10 to 3.5.10. The schools were assigned to experimental group (Ordinance Clothing Factory School) and control group (Kendriya

Vidyalaya Clothing Factory School) by flip a coin method. The investigator selected 3 teachers as experimental and 3 teachers as control group who fulfilled the inclusion criteria by non probability purposive sampling technique.

A brief introduction about self and study was given to the teachers by the investigator and confidentiality of the response was assured. The data was collected by self administered questionnaire. On an average it took 10 minutes for demographic variables by interview schedule, 20-30 minutes for knowledge and attitude scale. The experimental group received selected nursing intervention and control group with no intervention. Post-test was done for both the groups. The statistical analysis of the pilot study revealed that 66.67% had moderate knowledge and 66.67% had favorable attitude. The study revealed a positive correlation (r=0.9) between knowledge and attitude which was highly significant at $p<0.01$ level. There was no practical difficulties met by the investigator and tools were considered to be reliable and appropriate. Hence the same procedure was decided to be followed for the main study.

DATA COLLECTION PROCEDURE

The study was conducted after the approval of the Dissertation Committee and school authorities. A formal permission was obtained from Principal's of both schools .The study was conducted from 15.5.2010 to 15.6.2010 in O.C.F (Ordinance Clothing Factory) and K.V. O.C.F (Kendriya Vidyalaya Ordinance Clothing Factory School), Avadi, Chennai. Experimental and control group were selected from two setting. The teachers who fulfilled the inclusion criteria by non-probability purposive sampling technique were selected. Pre-test on knowledge and attitude was conducted for both the groups followed by selected nursing intervention (lecture cum discussion, standardized checklist and booklet) only for the experimental group. Post-test was done after one week for both the groups.

			Total
Date	**Experimental Group**	**Control group**	
15.5.10	3	2	5
17.5.10	2	2	4
18.5.10	2	2	4
19.5.10	2	2	4
20.5.10	2	1	3
21.5.10	2	1	3
22.5.10	2	2	4
24.5.10	2	1	3
25.5.10	1	1	2
26.5.10	2	1	3
27.5.10	1	1	2
28.5.10	2	2	4
29.5.10	1	2	3
31.5.10	1	2	3
1.6.10	1	2	3
2.6.10	1	2	3
3.6.10	1	2	3
4.6.10	1	1	2
5.6.10	1	1	2
Total	**30**	**30**	**60**

DATA ANALYSIS PROCEDURE

The data's were analyzed and interpreted based on the objectives using both descriptive and inferential statistics.

Descriptive Statistics

Frequency and percentage distribution was used to analyze the demographic variables of the study. Mean and standard deviation was used to compute the level of knowledge and attitude parameters before and after the selected nursing intervention for identification of learning disability among teachers in both groups.

Inferential Statistics

Paired 't" test was used to assess the effectiveness of selected nursing intervention by comparing the pretest and posttest level of knowledge and attitude in experimental and control group.

Unpaired ‘t’ test was used to assess the effectiveness of selected nursing intervention by comparing the posttest level of knowledge and attitude between the experimental and control group.

Chi-square was used to associate the level of knowledge and attitude with demographic variables.

CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of data collected from 60 teachers to evaluate the effectiveness of selected nursing intervention to assess the pretest and posttest level of knowledge and attitude in O.C.F and K.V.O.C.F, Avadi, Chennai.

ORGANISATION OF THE DATA

The findings of the study were grouped and analyzed under the following sections:

Section A **:** Description of the demographic variables of the teachers.

Section B **:** Assessment of the pre and post test level of knowledge and attitude in the experimental group and control group.

Section C **:** Comparison of the mean score of pre and post test level of knowledge and attitude in experimental and control group.

Section D **:** Comparison of the mean score of posttest level of knowledge and attitude between the experimental and control group.

Section E **:** Correlation of the post test level of knowledge and attitude in the experimental group.

Section F **:** Association of the post test level of knowledge and attitude with the selected demographic variables in the experimental and control group.

SECTION A

Table 1: Frequency and percentage distribution of teachers working in Ordinance Clothing factory (O.C.F) and Kendriya Vidyalaya Ordinance Clothing Factory (K.V.O.C.F)

n = 60

Demographic Variables	Experimental Study		Control Study	
	No.	%	No.	%
Age in years				
22 – 30	1	3.33	1	3.33
31 – 49	22	73.33	22	73.33
50 – 60	7	23.34	7	23.34
Gender				
Male	-	-	-	-
Female	30	100.0	30	100.0
Qualification				
B.Sc/B.A, B.Ed	30	100.0	30	100.0
M.Sc/M.A., B.Ed	-	-	-	-
M.Sc./M.A, M.Phil	-	-	-	-
Years of Experience				
2 – 6	2	6.67	2	6.67
6 – 10	8	26.66	6	20.0
10 – 14	9	30.00	17	56.66
>14	11	36.67	5	16.67
Group				
Preschool (LKG and UKG)	13	43.33	11	36.67
Primary (1 – 5^{th} Std)	17	56.67	19	63.33
Secondary (6 – 10^{th} Std)	-	-	-	-
Any personal experience				
Yes	10	33.33	10	33.33
No	20	66.67	20	66.67
Are you a parent teacher association member				
Yes	30	100.0	30	100.0
No	-	-	-	-

The above table describes the distribution of demographic variables of teachers.

With respect to age of teachers, 1(3.33%) were in the age group 22-30 years, 22(73.33%) were in the age group of 31-49, 7(23.34%) were in the age group of 50-60% in the experimental and control group.

Regarding the gender, 30(100%) were females both in the experimental and control group.

Considering the qualification 30(100%) was B.Sc/B.A, B.Ed in both experimental and control group.

With respect to years of experience 2(6.67%) had 2-6 years of experience, 8(26.66%) had 6-10 years of experience, 9(30%) had 10-14 years of experience, 11(36.67%) had >14 years of experience in the experimental group.

And 2(6.67%) had 2-6 years of experience, 6(20%) had 6-10 years of experience, 17(56.66%) had >10-14 years of experience, 5(16.67%) had > 14 years of experience in the control group.

Regarding the group 13(43.33%) were in preschool (LKG and UKG), 17(56.67%) were in the primary (1-5th standard) in the experimental group.

And 11(36.67%) were in preschool (LKG and UKG), 19(63.33%) were in primary (1-5th std) in the control group.

With respect to any personal experience10 (33.33%) said' yes', 20(66.67%) said in 'no' in the experimental group and in the control group.

Considering the parent teacher association member 30(100%) were in the experimental group and 30(100%) were in the control group.

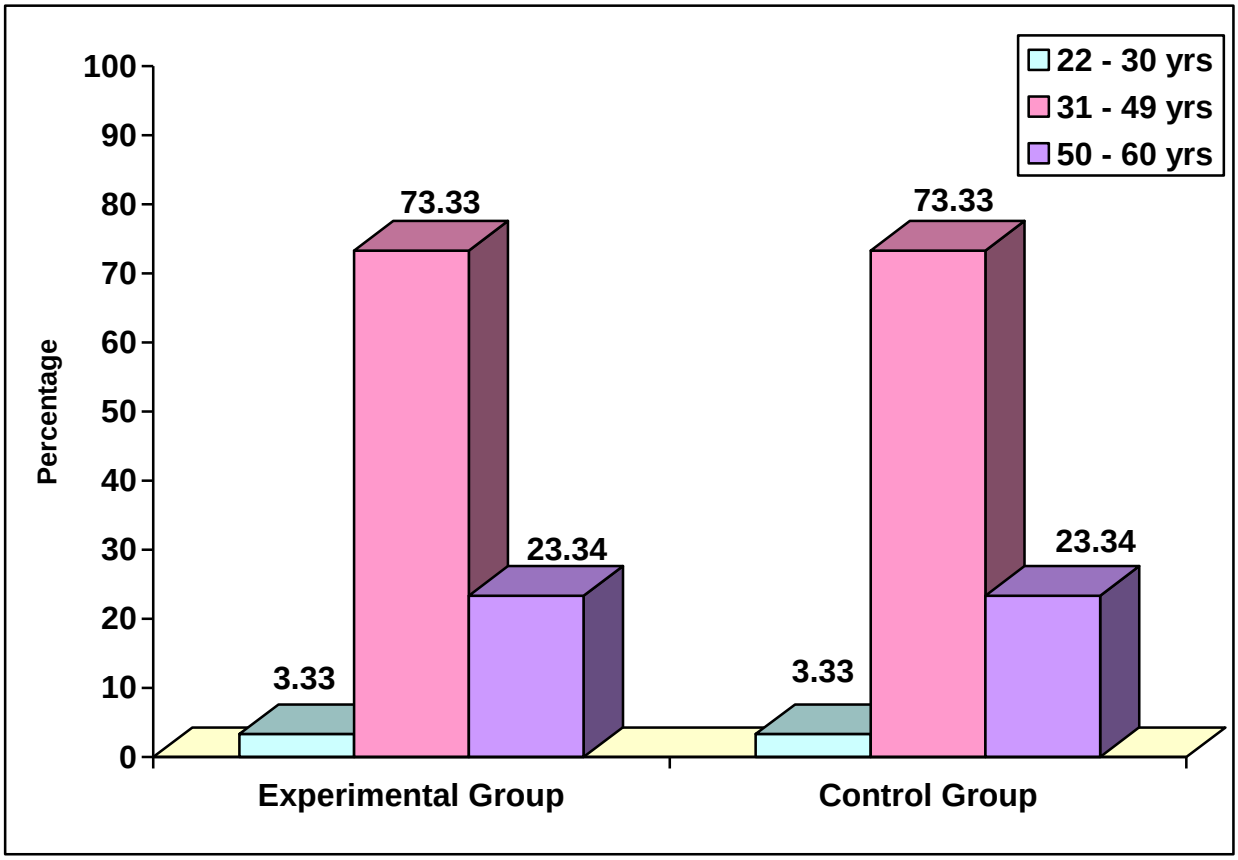


Fig.2: Percentage distribution of age of the respondents in the experimental and control group

SECTION B:

Table 2: Frequency and percentage distribution of pretest and post test level of knowledge in experimental and control group.

n = 30

KNOWLEDGE		Inadequate		Mod. adequate		Adequate	
		No	%	No	%	No	%
Experimental Group	Pre test	20	66.67	10	33.33	-	-
	Post test	-	-	19	63.33	11	36.67
Control Group	Pre test	18	60.0	12	40.0	-	-
	Post test	19	63.34	10	33.33	1	3.33

The above table represents the frequency and percentage distribution of pretest and post test level of knowledge in experimental and control group which shows in:

Experimental group- In pre-test 20(66.67%) had inadequate knowledge, 10(33.33%) had moderately adequate knowledge. In posttest, 19(63.33%) had moderately adequate, and 11(36.67%) had adequate knowledge in experimental group.

Control group- In pre-test 18(60%) had inadequate, 12(40%) had moderately adequate knowledge. In post-test 19(63.34%) had inadequate, 10(33.33%) had moderately adequate, and 1(3.33%) had adequate knowledge in the control group.

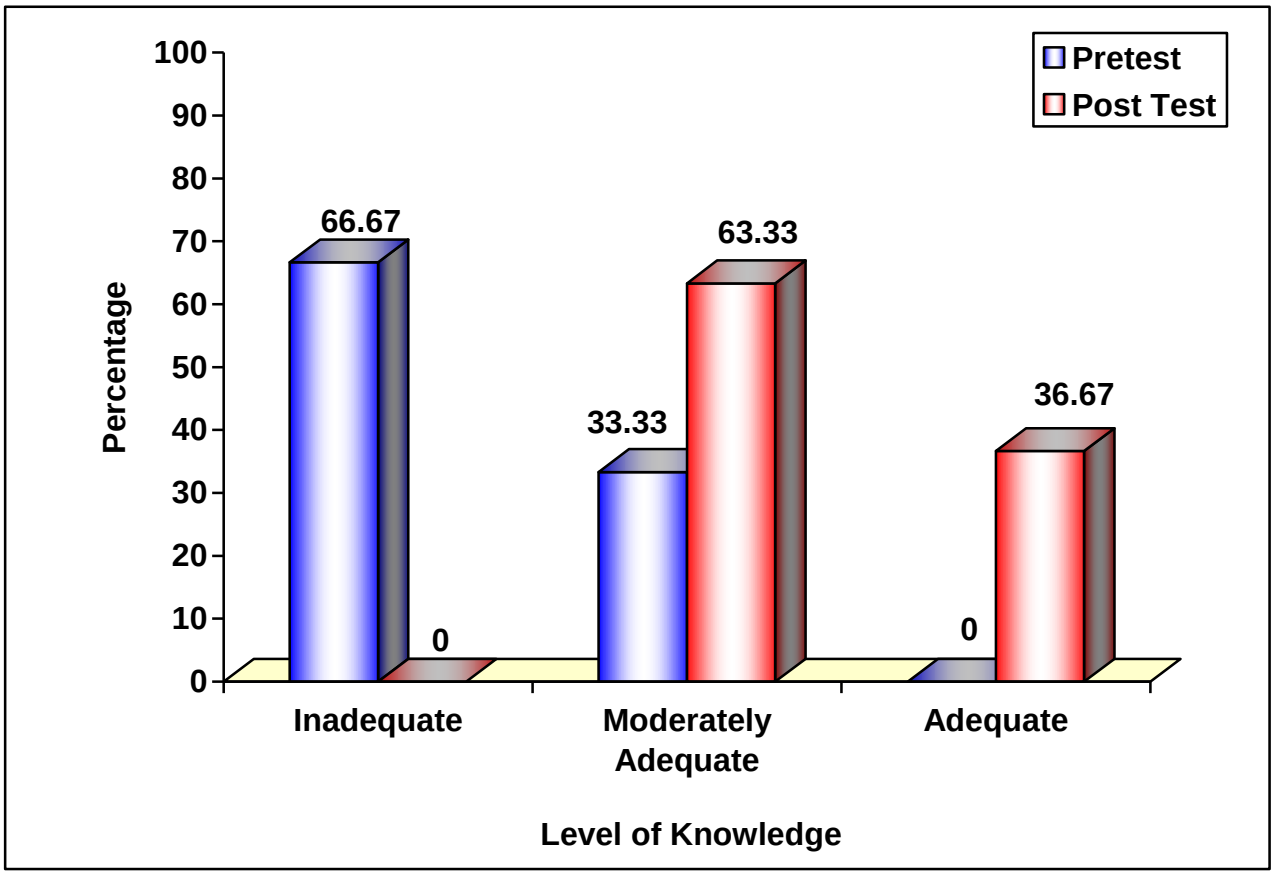


Fig.3: Percentage distribution of pretest and post test level of knowledge in the experimental group

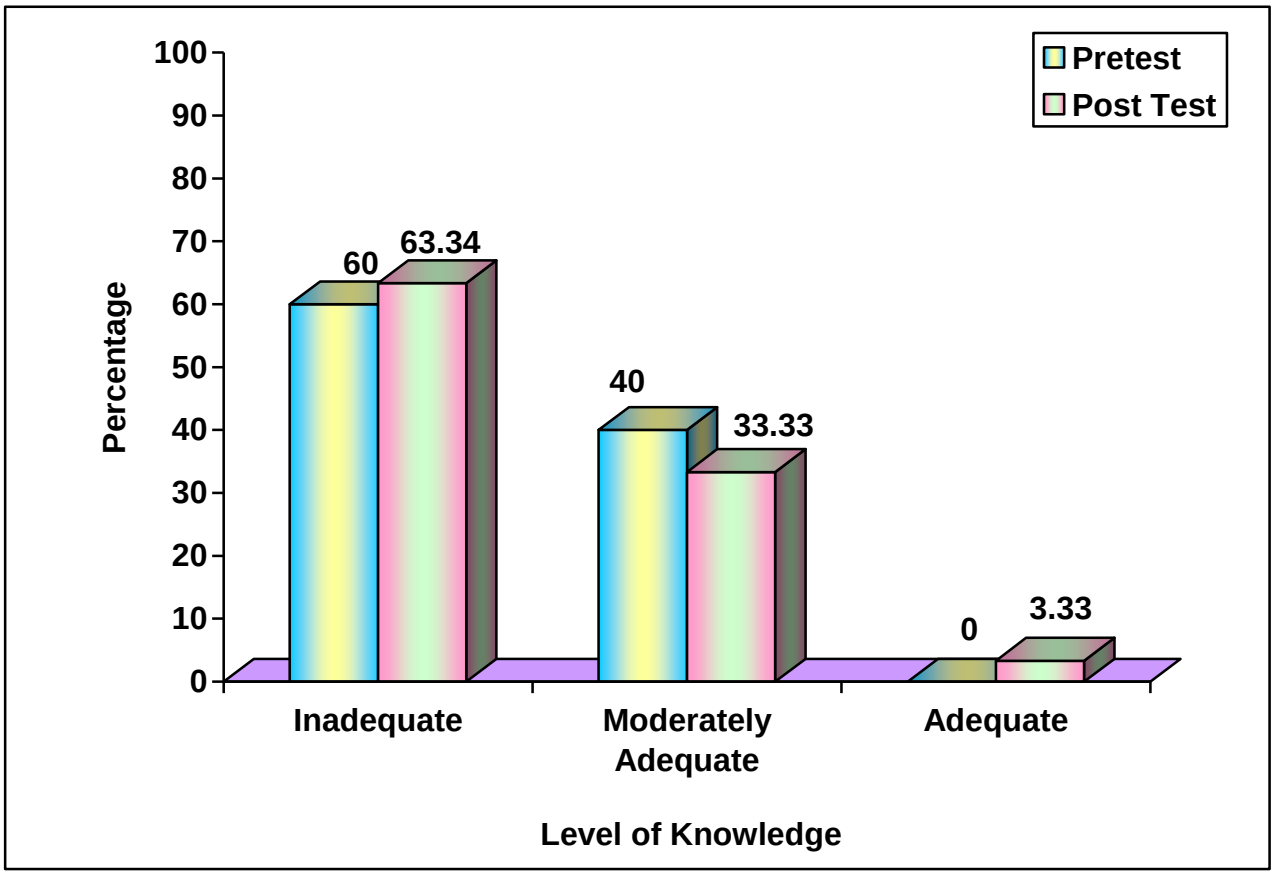


Fig 4: Percentage distribution of pretest and post test level of knowledge in the control group

Table 3: Frequency and percentage distribution of pre test and post test level of attitude in experimental and control group.

n=60

ATTITUDE		Unfavorable		Moderately favorable		Favorable	
		No	%	No	%	No	%
Experimental Group	Pre test	9	30.0	19	63.33	2	6.67
	Post test	-	-	14	46.67	16	53.33
Control Group	Pre test	8	26.67	21	70.0	1	3.33
	Post test	7	23.33	23	76.67	-	-

The above table represents the frequency and percentage distribution of pre test and post test level of attitude in experimental and control group which shows in:

Experimental group: In pre-test 9(30%) had unfavorable attitude, 19(63.33%) had moderately favorable attitude, 2(6.67%) had favorable attitude. And in the post test 14(46.67%) had moderately favorable attitude and 16(53.33%) had favorable attitude.

In control group 8(26.67%) had unfavorable attitude, 21(70%) had moderately favorable attitude, 1(3.33%) had favorable attitude in the pretest and in the post-test 7(23.33%) had unfavorable and 23(76.67%) had moderately favorable attitude.

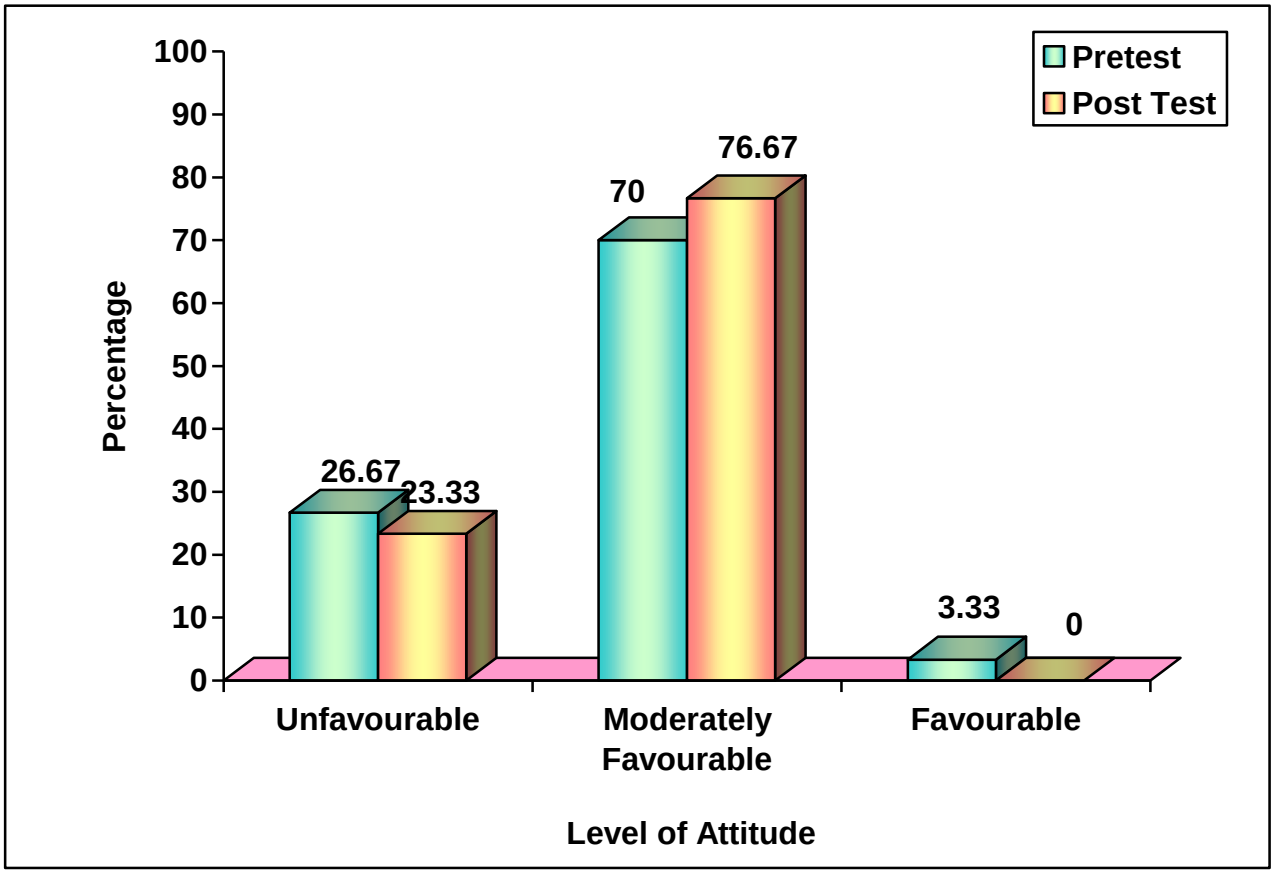


Fig.5: Percentage distribution of pretest and post test level of attitude in the control group

SECTION C

Table 4: Comparison of mean score of pretest and post test level of knowledge and attitude in the experimental and control group.

n=60

	Knowledge				ATTITUDE			
	Experimental Group		Control group		Experimental group		Control Group	
	Pre test	Post Test	Pre test	Post Test	Pre test	Post Test	Pre test	Post Test
Mean	13.47	22.37	13.97	14.27	33.70	45.93	33.40	33.10
Mean Difference	8.90		0.30		12.23		0.30	
S.D	4.058	2.773	4.081	4.323	7.831	4.425	6.678	6.392
t- value	20.332		1.104		9.816		0.712	
d.f	29		29		29		29	
Significant / Non significant	S***		NS		S***		NS	

***p<0.001, S – Significant, N.S – Not Significant

The above table of knowledge in experimental group shows the pretest mean score 13.47 with S.D 4.058 and posttest mean score 22.37 and S.D 2.773. The calculated 't' value was 20.332 which showed high statistical significance of p<0.001 level.

In control group the pretest mean score 13.97 and S.D 4.081 and the posttest mean score 14.27 and S.D was 4.323. The calculated't' value was 1.104 which was not statistically significant.

The above table of attitude in experimental group shows 33.70 mean score and 7.831 S.D in the pre test and 45.93 mean score and S.D 4.425 in the posttest. The calculated't' value was 9.816 which showed high statistical significance at p< 0.001 level.

In the control group pretest mean score 33.40 and S.D 6.678 and the posttest mean were 33.10 with S.D 6.392. The calculated't' value was 0.712 which was not statistically significant.

SECTION D

Table 5: Comparison of mean score post test level of knowledge and attitude between experimental and control group.

n=60

	Knowledge		**ATTITUDE**	
	Experimental Group	**Control group**	**Experimental group**	**Control Group**
	Post Test	**Post Test**	**Post Test**	**Post Test**
Mean	22.37	14.27	45.93	33.10
S.D	2.773	4.323	4.425	6.392
t-value	8.639		9.042	
d.f	58		58	
Significant / Non significant	S***		S***	

***p<0.001, S – Significant

The above table of knowledge in experimental group shows the posttests mean score 22.37and S.D 2.773. And the posttest mean score 14.27 and S.D 4.323 in the control group. The calculated‘t’ value was 8.639 which showed high statistical significance at p<0.001 level.

In attitude the posttest mean score 45.93 with S.D 4.425 in the experimental group, and 33.10 with S.D 6.392 in the control group. The calculated‘t’ value was 9.042 which showed high statistical significance at p< 0.001 level.

SECTION E

Table 6: Correlation of post test level of knowledge and attitude in the experimental group

n = 30

Post Test	Mean	S.D	'r' Value
Knowledge	22.37	2.773	r = 0.491 (P<0.01) S**
Attitude	45.93	4.425	

**p<0.01, S – Significant

The above table shows the mean score of 22.37 and S.D 2.773 in the posttest knowledge in the experimental group and 45.93 mean score with S.D 4.425 in the posttest attitude of experimental group. The calculated 'r' value was 0.491 which showed high statistical significance at p<0.01 level.

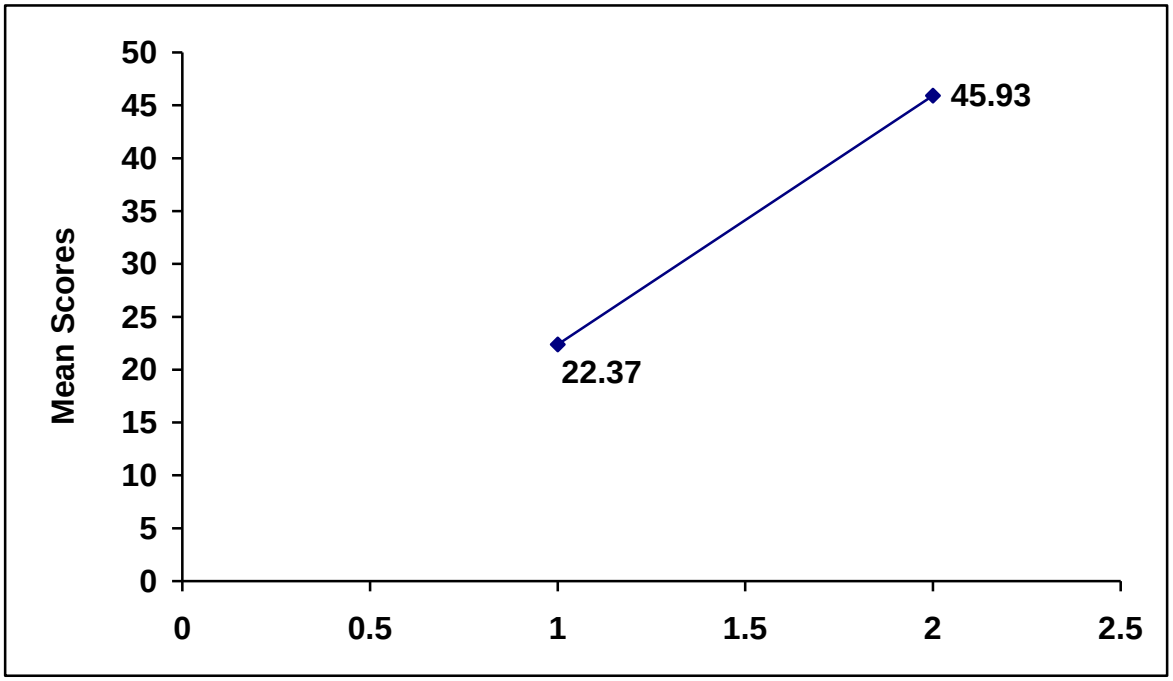


Fig.6: Correlation between post test level of knowledge and attitude in the experimental group

SECTION F

Table 7: Association of post test level of knowledge with selected demographic variables in the experimental group n = 30

Demographic Variables	Inadequate		Moderately Adequate		Adequate		Chi-Square Value
	No.	%	No.	%	No.	%	
Age in years							$\chi^2 = 7.21$
22 – 30	-	-	0	0	1	3.33	d.f = 2
31 – 49	-	-	17	56.66	5	16.67	S*
50 – 60	-	-	2	6.67	5	16.67	
Years of Experience							
2 – 6	-	-	2	6.66	0	0	$\chi^2 = 2.227$
6 – 10	-	-	6	20.0	2	6.67	d.f = 3
10 – 14	-	-	5	16.67	4	13.33	N.S
>14	-	-	6	20.0	5	16.67	
Group							$\chi^2 = 0.344$
Preschool (LKG & UKG)	-	-	9	30.0	4	13.33	d.f = 1
Primary (1 – 5th Std)	-	-	10	33.34	7	23.33	N.S
Secondary (6 – 10th Std)	-	-	-	-	-	-	
Any personal experience							$\chi^2 = 1.148$
Yes	-	-	5	16.67	5	16.67	d.f = 1
No	-	-	14	46.66	6	20.0	N.S

*p<0.05, S-Significant, N.S – Not Significant

The above table shows the association of post test level of knowledge with demographic variables among teachers in the experimental group. The analysis revealed that there was significant association with age $\chi^2 = 7.21$ at p<0.05.

The analysis revealed that there was no significant association with years of experience, group, any personal experience, parent teacher association member.

Table 8: Association of post test level of attitude with selected demographic variables in the experimental group

n = 30

Demographic Variables	Unfavourable		Moderately Favourable		Favourable		Chi-Square Value
	No.	%	No.	%	No.	%	
Age in years							$\chi^2 = 0.667$
22 – 30	-	-	6	20.0	4	13.33	d.f = 2
31 – 49	-	-	7	23.33	8	26.66	N.S
50 – 60	-	-	2	6.67	3	10.0	
Years of Experience							
2 – 6	-	-	2	6.67	0	0	$\chi^2 = 2.929$
6 – 10	-	-	4	13.33	4	13.33	d.f = 3
10 – 14	-	-	5	16.67	4	13.33	N.S
>14	-	-	4	13.33	7	23.33	
Group							$\chi^2 = 0.136$
Preschool (LKG & UKG)	-	-	6	20.0	7	23.33	d.f = 1
Primary (1 – 5^{th} Std)	-	-	9	30.0	8	26.67	N.S
Secondary (6 – 10^{th} Std)	-	-	-	-	-	-	
Any personal experience							$\chi^2 = 0.600$
Yes	-	-	4	13.33	6	20.0	d.f = 1
No	-	-	11	36.67	9	30.0	N.S

N.S – Not Significant

The above table shows the association of post test level of attitude with selected demographic variables in the experimental group. The analysis revealed that there was no significant association between post assessment level attitudes with selected demographic variables.

Table 9: Association of post test level of knowledge with the selected demographic variables in the control group

n = 30

Demographic Variables	Inadequate		Moderately Adequate		Adequate		Chi-Square Value
	No.	%	No.	%	No.	%	
Age in years							$\chi^2 = 1.402$
22 – 30	4	13.33	2	6.67	0	0	d.f = 4
31 – 49	9	30.0	4	13.33	1	3.33	N.S
50 – 60	6	20.0	4	13.33	0	0	
Years of Experience							
2 – 6	0	0	2	6.67	0	0	$\chi^2 = 9.159$
6 – 10	5	16.67	1	3.33	0	0	d.f = 6
10 – 14	5	16.67	1	3.33	1	3.33	N.S
>14	9	30.0	6	20.0	0	0	
Group							$\chi^2 = 1.556$
Preschool (LKG & UKG)	6	20.0	5	16.67	0	0	d.f = 2
Primary (1 – 5^{th} Std)	13	43.33	5	16.67	1	3.33	N.S
Secondary (6 – 10^{th} Std)	-	-	-	-	-	-	
Any personal experience							$\chi^2 = 4.989$
Yes	4	13.33	6	20.0	0	0	d.f = 2
No	15	50.0	4	13.33	1	3.33	N.S

N.S – Not Significant

The above table shows the association of post test level of knowledge in control group with the selected demographic variables. The analysis revealed that there was no significant association between post assessment level of knowledge with the selected demographic variables.

Table 10: Association of post test level of attitude with the selected demographic variables in the control group

n = 30

Demographic Variables	Unfavourable		Moderately Favourable		Favourable		Chi-Square Value
	No.	%	No.	%	No.	%	
Age in years							$\chi^2 = 2.440$
22 – 30	4	13.33	2	6.67	-	-	d.f = 2
31 – 49	7	23.33	7	23.33	-	-	N.S
50 – 60	2	6.67	8	26.67	-	-	
Years of Experience							
2 – 6	1	3.33	1	3.33	-	-	$\chi^2 = 5.643$
6 – 10	5	16.67	1	3.33	-	-	d.f = 3
10 – 14	3	10.0	4	13.33	-	-	N.S
>14	4	13.33	11	36.67	-	-	
Group							$\chi^2 = 0.344$
Preschool (LKG & UKG)	4	13.33	7	23.33	-	-	d.f = 1
Primary (1 – 5^{th} Std)	9	30.0	10	33.33	-	-	N.S
Secondary (6 – 10^{th} Std)	-	-	-	-	-	-	
Any personal experience							$\chi^2 = 1.086$
Yes	3	10.0	7	23.34	-	-	d.f = 1
No	10	33.33	10	33.33	-	-	N.S

N.S – Not Significant

The above table shows the association of post test level of attitude in control group with the selected demographic variables. The analysis revealed that there was no significant association between post assessment level of attitude with selected. demographic variables.

CHAPTER – V

DISCUSSION

This chapter deals with the discussion of the result of the data analysis based on the objectives of the study and hypothesis. A study to assess the effectiveness of selected nursing interventions on knowledge and attitude regarding the identification of learning disability among teachers at selected schools, Avadi, Chennai, 2010-2011.

The objectives were

1. To assess the pre-test level of knowledge and attitude regarding the identification of learning disability among teachers in experimental group and control group.
2. To assess the post-test level of knowledge and attitude regarding the identification of learning disability among teachers in experimental and control group.
3. To compare the effectiveness of selected nursing interventions on level of knowledge and attitude regarding the identification of learning disability among teachers.
4. To associate the post-test level of knowledge and attitude with the selected demographic variables in experimental and control group.

Regarding demographic variables, with respect to age of teachers, 3.33% were in the age group 22-30 years, 73.33% were in the age group of 31-49, 23.34% were in the age group of 50-60% in the experimental and control group. Regard to gender 100% were females both in the experimental and control group. Considering the qualification 100% were B.Sc/B.A, B.Ed in both experimental and control group. With respect to years of experience 6.67% had 2-6 years of experience, 26.66% had 6-10 years of experience, 30% had 10-14 years of experience, 36.67% had 11 years of experience in the experimental group and 6.67% had 2-6 years of experience, 20% had 6-10 years of experience, 56.66 % had 10-14 years of experience, 16.67% had > 14 years of experience in the control group. With respect to the group 43.33% were in preschool (LKG and UKG), 56.66% were in the primary (1-5th standard) in the experimental group. And 36.67% were in preschool (LKG and UKG), 63.33% were in primary (1-5th std) in the control group. With respect to any personal experience 33.33% said yes, 66.67% said in No in the experimental group and in the control group.

The first objective was to assess the pre-test level of knowledge and attitude regarding the identification of learning disability among teachers in experimental group and control group.

The analysis revealed that in the experimental group, 66.67% had inadequate knowledge, 33.33% had moderately adequate knowledge in pretest level of knowledge.

In the experimental group, 30% had unfavorable attitude, 63.33% had moderately favorable attitude 6.67% had favorable attitude in the pretest test level of attitude.

In the control group, 60% had inadequate, 40% had moderately adequate knowledge in the pretest level of knowledge

In the control group, 26.67% had unfavorable attitude, 70% had moderately favorable attitude, and 3.33% had favorable attitude in the pretest.

The above findings were consistent with the study conducted by Sangeeta (2009) the impact of intervention training on mental abilities of slow learners of 4 – 6 years old of Hisar district of Rajasthan were selected. The groups were divided into experimental (20) and control group (20). Pre-testing stage showed low to moderate mental abilities. After intervention the experimental group performed better in all activities of verbal, perceptual, performance, quantitative and memory aspects of mental abilities.

The second objective was to assess the post test level of knowledge and attitude regarding the identification of learning disability among teachers in experimental group and control group.

The analysis revealed in the experimental group, 63.33% had moderately adequate, 36.67% had adequate knowledge in the post test level of knowledge.

In the experimental group, 46.67% had moderately favorable, 53.33% had favorable attitude in the posttest test level of attitude.

In the control group, 63.34% had inadequate, 33.33% had moderately adequate, 3.33% had adequate knowledge in post test level of knowledge

In the control group, 23.33% had unfavorable, 76.67% had moderately favorable posttest level of attitude.

The above findings were consistent with UZI Brook and Nathan Watemberg (1999) investigated teacher's knowledge and attitude towards learning disability among high school teachers. Forty-six high school teachers were interviewed. They were divided into 2 groups: 25 teachers taught at special educational school (School 1) and 21 teachers taught at special education school (School 2). The result showed 74% had relatively low knowledge about learning disability and attitude score was relatively 72.5% and 30% considered learning disability to be result of parental attitudes namely "spoiling" the children.

The third objective was to compare the effectiveness of selected nursing interventions on level of knowledge and attitude regarding the identification of learning disability among teachers.

The analysis in experimental group knowledge revealed the pretest mean score was 13.47 with S.D 4.058 and posttest mean score 22.37 and S.D 2.773. The calculated't' value was 20.332 which showed high statistical significance of $p<0.001$ level.

The pretest mean score was 33.70 and 7.831 S.D in the pretest and 45.93 and S.D 4.425 in the posttest level of attitude in the experimental group. The calculated't' value was 9.816 which showed high statistical significance at $p< 0.001$ level.

The analysis in control group knowledge revealed the pretest mean score was 13.97 and S.D 4.081 and the posttest mean score was 14.27 and S.D was 4.323. The calculated't' value was 1.104 which was not statistically significant.

The pretest mean score was 33.40 and S.D 6.678 and the posttest mean were 33.10, S.D was 6.392 in the level of attitude. The calculated 't' value was 0.712 which was not statistically significant.

The post test knowledge mean score was 22.37, S.D 2.773 in the experimental group and the mean score was 14.27, S.D 4.323 in the control group. The calculated 't' value was 8.639 which showed high statistical significance at $p<0.001$ level.

The post test attitude mean score were 45.93, S.D 4.425 in the experimental group, and 33.10 mean score, S.D 6.392 in the control group. The calculated 't' value was 9.042 which showed high statistical significance at $p< 0.001$ level.

The mean score of 22.37 and S.D 2.773 in the posttest knowledge in the experimental group and 45.93 mean score, S.D 4.425 in the posttest attitude of experimental group. The calculated 'r' value was 0.491 which showed statistical significance at $p<0.01$ level.

Hence the null hypothesis H_{01} stated that there is no significant difference in the level of the knowledge and level of attitude of teachers who have been administered with selected nursing intervention and those who have not was rejected.

The above findings were consistent with the findings of the study conducted by Debora .G Boeck, Glen .G Foster (2006) to find the effectiveness of a learning disabilities inservice program. In the study forty – three regular classroom teachers were provided with four one – hour inservice session. 24 control subjects did not participate but did complete dependent measure. Pre and post test administration of the learning disabilities information inventory were utilized. An analysis of covariance was done, which showed an increase in knowledge of learning disabilities among experimental group than control group.

The fourth objective was to associate the post test level of knowledge and attitude with the selected demographic variables in experimental and control group.

The association of post test level of knowledge with selected demographic variables among teachers in the experimental group. The analysis revealed that there was significant association of demographic variables such as age $\chi^2 = 7.21$ at $p<0.05$ level.

The analysis revealed that there was no significant association with years of experience, group, any personal experience, parent teacher association member.

The analysis reveal that age in years, years of experience, group, any personal experience, parent teacher association member show no significant association of attitude with selected demographic variables in the experimental group.

The analysis reveal that age in years, years of experience, group, any personal experience, parent teacher association member shows that there is no significant association of the mean improvement in the knowledge score with selected demographic variables in the control group.

The analysis reveal age in years, years of experience, group, any personal experience, parent teacher association member shows that there was no significant association of the mean improvement of the attitude with selected demographic variables in the control group.

The above findings were consistent with the findings of the study conducted by Jamal M.Al. Khatib (2007) investigated Jordanian regular education teacher's knowledge of learning disabilities. Sample consisted of 405 regular classroom teachers. Teachers completed 40 items test. T-test for independent samples and ANOVA were used to analyze the survey data. Result revealed teachers had moderate level of knowledge, female teachers were found to be significantly more knowledge than male and teacher's level of knowledge was unrelated to teacher's age, teaching experience (or) academic qualifications.

CHAPTER – VI

SUMMARY, NURSING IMPLEMENTATIONS, RECOMMENDATION AND LIMITATIONS

Children under 16 years of age constitute over 40% of India's population among whom nearly 13-14% of school children suffer from learning disability and in a school of say 4000 children atleast 100 could be dyslexic. An estimated 30 million are known to be dyslexic in India. Research studies indicate that genetic, environment, antenatal, intranatal, postnatal, physical and chemical are the cause for learning disability and is associated with the prevalence of learning disability in the current study of which teachers are unaware.

From the review of literature the investigator has been able to understand that identification and interventional program of learning disability at an early stage has an effect on improvement in the knowledge and attitude of teachers and thereby brings positive attitude which was monitored by the posttest results. And hence this type of early interventional program was decided to be demonstrated to all teachers in the school.

The objectives were

1. To assess the pre-test level of knowledge and attitude regarding the identification of learning disability among teachers in experimental group and control group.
2. To assess the effectiveness of post-test level of knowledge and attitude regarding the identification of learning disability among teachers in experimental and control group.
3. To compare the effectiveness of selected nursing interventions on level of knowledge and attitude regarding the identification of learning disability among teachers.
4. To associate the post-test level of knowledge and attitude with the selected demographic variables in experimental and control group.

The assumptions of the study were

1. Teachers may have some knowledge regarding learning disability.
2. Teachers receiving selected intervention may have enhanced knowledge than those teachers who do not.

3. Adequate knowledge regarding learning disability may promote favorable attitude among teachers.

The null hypothesis formulated were

H_{01}- There is no significant difference in the knowledge and attitude of teachers who have been administered with selected nursing intervention and those who have not.

The conceptual frame work for the study was based on Wiedenbach's Helping Art of clinical Nursing Theory and provided a comprehensive frame work for achieving the objective of the study.

The quasi experimental design with two groups experimental and control group was adopted by the researcher to evaluate the effectiveness of selected nursing intervention on the knowledge and attitude regarding identification of learning disability among teachers, and non probability purposive sampling technique was used to select the sample. The number of sample was restricted to 60 (30 in the experimental group and 30 in the control group).

The findings of the study were

Regarding demographic variables, with respect to age of teachers, 3.33% were in the age group 22-30 years, 73.33% were in the age group of 31-49, 23.34% were in the age group of 50-60% in the experimental and control group. With respect to gender, the 100% were females both in the experimental and control group. With respect to qualification 100% were B.Sc/B.A, B.Ed in both experimental and control group. With respect to years of experience 6.67% had 2-6 years of experience, 26.66% had 6-10 years of experience, 30% had 10-14 years of experience, 36.67% had 11 years of experience in the experimental group and 6.67% had 2-6 years of experience, 20% had 6-10 years of experience, 56.66 % had 10-14 years of experience, 16.67% had > 14 years of experience in the control group. With respect to the group 43.33% were in preschool (LKG & UKG), 56.66% were in the primary (1-5th standard) in the experimental group. And 36.67% were in preschool (LKG&UKG), 63.33% were in primary (1-5th std) in the control group. With respect to any personal experience 33.33% said 'yes', 66.67% said in 'no' in the experimental group and in the control group.

In the experimental group, 66.67% had inadequate knowledge, 33.33% had moderately adequate knowledge in pretest level of knowledge.

In the experimental group, 30% had unfavorable attitude, 63.33% had moderately favorable attitude,6.67% had favorable attitude in the pretest test level of attitude.

In the control group, 60% had inadequate, 40% had adequate knowledge and 63.34% had inadequate knowledge in the pretest level of knowledge

In the control group, 26.67% had unfavorable attitude, 70% had moderately favorable attitude, 3.33% had favorable attitude in the pretest.

In the experimental group, 63.33% had moderately adequate, 36.67% had adequate knowledge in the post test level of knowledge.

In the experimental group, 46.67% had moderately favorable, 53.33% had favorable attitude in the posttest test level of attitude.

In the control group, 63.34% had inadequate, 33.33% had adequate, 3.33% had adequate knowledge in post test level of knowledge

In the control group, 23.33% had unfavorable, 76.67% had moderately favorable posttest level of attitude.

The pretest mean score was 13.47 with S.D 4.058 and posttest mean score 22.37 and S.D 2.773. The calculated‘t’ value was 20.332 which showed high statistical significance of $p<0.001$ level.

The pretest mean score was 33.70 and 7.831 S.D in the pretest and 45.93 and S.D 4.425 in the posttest level of attitude in the experimental group. The calculated‘t’ value was 9.816 which shoed high statistical significance at $p< 0.001$ level.

The pretest mean score was 13.97 and S.D 4.081 and the posttest mean score was 14.27 and S.D was 4.323. The calculated‘t’ value was 1.104 which was not statistically significant.

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The mean score were 45.93, S.D 4.425 in the experimental group, and 33.10 mean score, S.D 6.392 in the control group. The calculated‘t’ value was 9.042 which showed high statistical significance at $p< 0.001$ level.

The mean score of 22.37 and S.D 2.773 in the posttest knowledge in the experimental group and 45.93 mean score, S.D 4.425 in the posttest attitude of experimental group. The calculated ‘r’ value was 0.491 which showed high statistical significance at $p<0.01$ level.

Hence the null hypothesis H_{01} stated that there is no significant difference in the level of knowledge and level of attitude of teachers who have been administered with selected nursing intervention and those who have not have been rejected.

The association of post test level of knowledge with selected demographic variables among teachers in the experimental group. The analysis revealed that there was significant association of demographic variables such as age $\chi^2 = 7.21$ at $p<0.05$ level.

The analysis revealed that there was no significant association with years of experience, group, any personal experience, parent teacher association member.

The analysis reveal that age in years, years of experience, group, any personal experience, parent teacher association member show no significant association of attitude with selected demographic variables in the experimental group.

The analysis reveal that age in years, years of experience, group, any personal experience, parent teacher association member shows that there is no significant association of the mean improvement in the knowledge score with selected demographic variables in the control group.

The analysis reveal age in years, years of experience, group, any personal experience, parent teacher association member shows that there was no significant association of the mean improvement of the attitude with selected demographic variables in the control group.

NURSING IMPLICATIONS

The investigator has derived the following implications from the study which are vital concern in the field of nursing practice, nursing administration, nursing education and nursing research.

Nursing Practice

1. The child health nurse as a service provider should periodically organize and conduct mass education program on causes and prevention of learning disability using appropriately designed audio visual aids.
2. The nurse must implement information education communication (IEC) to create awareness to the community on the early intervention and its role in reducing levels of learning disability among children.
3. As direct service care provider, enforce genetic counseling among elderly couples and couples with hereditary disorder in the family to prevent the birth of children with learning disability.

Nursing Administration

1. The child health nurse as an administrator should design formal teaching program on prevention of learning disability in the community.
2. Provide opportunities for nurses to attend training program.
3. Carry out prevalence studies periodically and produce an updated epidemiological picture in the community.

Nursing Education

1. Nurse educator should actively involve in the process of organizing continuing education program on learning disability disorder and prevention measure.

2. The nurse must organize symposium, seminars, conferences and workshops to disseminate the current research findings on learning disability to the public and to the other health professionals.
3. Make available literature related to effect of interventional program on selected learning disability among general learning disability and other learning disability in the library for student reference.
4. Nurse should recommend for a psychologist, optometrist, ophthalmologist, and ENT specialist and a counselor as part of health check-up in the school.

Nursing Research

1. Encourage further studies in prevalence of learning disability in the community.
2. As evident from the review of literature more research need to be conducted on the aspects of early interventional program in school and learning disability.
3. Encourage further research studies in other cost effective measures on learning disability.

RECOMMENDATIONS

1. A similar study can be replicated on a large sample at state and national level.
2. A similar study can be conducted on prevalence of learning disability and other interventional program.
3. A study can be done to find the contributing causes of learning disability.
4. A similar study can be conducted among children in different settings.
5. A similar study can be conducted among mothers.
6. A similar study can be done on focusing on single learning disability.
7. A similar study can be done on mothers with learning disabled child.
8. A comparative study can be done on knowledge and attitude of mothers and teachers, and the early interventional program.

LIMITATIONS

1. Teachers showed lack of interest in the starting as they felt they knew everything, and blamed parents for the cause of learning disability.
2. Knowledge and attitude of school teachers was assessed only through structured questionnaire.

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APPENDIX – A

LIST OF EXPERTS FOR CONTENT VALIDITY

1. **Dr.Mohan Easow, M.D, DCH**
   Pediatrician,
   Mohan Clinic, Anna Nagar,
   Chennai – 26.

2. **Mrs.Anitha Rajendra Babu, M.Sc(N)**
   Principal,
   Rajalaksmi College of Nursing,
   Thandalam,
   Chennai-602 105.

3. **Mrs. Susan M.Sc(N)**
   HOD, Dept of child healthy nursing
   Omayal Achi College of Nursing,
   King Cross Road,
   Sathyamoorthy Nagar,
   Chennai – 600 062.

4. **Prof.Mrs.Edna Sweenie J, M.Sc. (N)**
   HOD, Dept of Child Health Nursing,
   Savitha College of Nursing,
   Thandalam,
   Chennai – 602 105.

5. **Amal Thomas, M.A, M.Phil (Clinical Psychology)**
   Consultant Clinical Psychologist,
   Reg No:A 10155,
   Kerala.

LETTER SEEKING EXPERTS OPINION FOR CONTENT VALIDITY

From

Mrs.Elizabeth.K.Chacko
M.Sc. (N) II Year,
Vel R.S Medical College – College of Nursing,
Avadi, Chennai – 600 062.

To

Respected Madam/Sir,

Sub: Requisition for expert opinion on suggestion for content validity of the tools.

I am Mrs Elizabeth.K.Chacko, a student of M.Sc.(Nursing)- II year at Vel R.S Medical College - College of Nursing, Avadi, Chennai – 62, affiliated to Dr.M.G.R.Medical University, Chennai.

As a partial fulfillment of the requirement in the M.Sc. Nursing Programme, I have to complete a dissertation the topic I have selected is **"A quasi experimental study to assess the effectiveness of selected nursing interventions on knowledge and attitude regarding identification of learning disability among teachers in selected schools, Avadi, Chennai 2010-2011".**

Herewith I am sending the developed tools for content validity and for your expert opinion & prickle suggestions.

Thanking you,

Yours sincerely,

Elizabeth.K.Chacko

Enclosures:

1. Statement and objectives of the study
2. Blue print of the tools
3. Content validity certificate

CERTIFICATE FOR CONTENT VALIDITY

This is to certify that the tools developed by **Elizabeth. K. Chacko,** M.Sc. Nursing student Vel R. S. Medical College – College of Nursing, Chennai on the topic, **"A quasi experimental study to assess the effectiveness of selected nursing interventions on knowledge and attitude regarding identification of learning disability among teachers in selected schools, Chennai"** is validated by the undersigned and she can proceed with this tool to conduct the main study.

Place : Chennai

Date: **Signature**

APPENDIX – B

INTRODUCTION

Good Morning!

I am a student of Vel R. S. Medical College – College of Nursing, conducting a study on assessment of effectiveness of selected nursing intervention on identification of learning disability among teachers.

I request you to permit me to include you teachers as my study participant for interventions such as lecture cum discussion, standardized check list and booklet which are known to help you identify learning disability students of your class. Further, I request you to kindly extend your co-operation in the smooth completion of the study.

Thanking You.

DEMOGRAPHIC ASSESSMENT

Age in years

1. 22-30
2. 31-49
3. 50-60

Gender

1. Male
2. Female

Qualification

1. B.Sc/B.A B.Ed.,
2. M.Sc/M.A, B.Ed.,
3. M.Sc/M.A, M.Phil

Years of experience

1. 2-6
2. 6-10
3. 10-14
4. >14

Group

1. Preschool (L.K.G & U.K.G)
2. Primary (1^{st} to 5^{th} standard)
3. Secondary (6^{th} to 10^{th} standard)

Any personal experience on identification of children with learning disability

1. Yes
2. No

Are you a parent teacher's association member (PTA)

1. Yes
2. No

KNOWLEDGE QUESTIONNAIRE

Instruction: Please tick the chosen answer from the given option.

1. Learning disability is

a. to process information as applied to reading, spelling, writing and maths.

b. to process information as to only reading.

c. to process information as to reading and writing.

d. an individual ability to process information as to only spelling, writing, and maths.

2. It is seen

a. as early as 2 years.

b. as early as 4 years.

c. as early as 5 years.

d. late as 10 years.

3. This disability strikes

a. only children.

b. only adolescents.

c. only old age.

d. all groups, regardless of age(or)race.

4. The causes of learning disability are

a. nata1 and genetic causes.

b. psychological causes.

c. chemical causes.

d. genetic and chemical causes.

5. The percentage of discrepancy noted for determining existence of learning disability.

a.>50%

b. <50%

c.>51%

d.>60%

6. To confirm this learning disability one must first rule out

a. Hearing problem.

b. Vision problem.

c. Hearing and vision problem.

d. Behavioral problem.

7. These children may have

a. High intelligence.

b. Low intelligence.

c. Below average intelligence.

d. Average to above average intelligence.

8. These children may have

a. only weakness.

b. only strength.

c. unique individual strength and weakness.

d. some strength, more weakness.

9. Learning disability is

a. neurologically based.

b. biologically based.

c. psychologically based.

e. emotionally based.

10. Learning disability children are

a. dull in academics.

b. bright in academics.

c. creative with unusual talents.

d. bright in academic, but not creative.

11. Key to help a child with learning disability

a. early identification.

b. early identification and treatment.

c. early treatment.

d. early identification, no treatment.

12. Learning disability child looks

a. neat and tidy.

b. awkward.

c. awkward and clumsy.

d. neat not tidy.

13. Children grasp pencil

a. awkwardly.

b. properly.

c. does not grasp pencil.

d. does grasp for short period of time.

14.Learning disability child demonstrated

a. no delay in learning to speak.

b. delay in learning to speak.

c. moderate delay in learning to speak.

d. severe delay in learning to speak.

15. Learning disability child has

a. confusion with similar looking letters(b & d), numbers(18 & 81)

b. confusion with letters like (b & d).

c. no confusion with letters(b & d) and numbers(18 & 81)

d. confusion with letters only.

16. Child may have habit of reading

a. reverse letter order in words (saw/was).

b. no problem of reverse letter order.

c. some problem of reverse letter order.

d. some problem, but rectifies.

17. These children has trouble with

a. long words.

b. long sentences.

c. medium sentence.

d. short simple words like(does/dus:Please/Pleeze)

18. These children read

a. slow

b. fast

c. slow or fast.

d. cannot read.

19. Learning disability child

a. demonstrates delay in learning to copy and write.

b. demonstrates no delay.

c. demonstrates slight delay, but cope up soon.

d. cannot write and copy copies.

20. These children can have problem such as

a. depression.

b. anxiety.

c. depression and anxiety.

d. only depression.

21.Learning disability child

a. share things, but express feelings.

b. trouble sharing things only.

c. trouble sharing and expressing feelings.

d. express feeling, but no sharing of things.

22. These children

a. set realistic goals, but not often.

b. set unrealistic goals.

c. never sets realistic goals.

d. trouble setting realistic goals.

23. These children are

a. easily distracted.

b. very attentive.

c. somewhat attentive.

d. never attentive.

24. Individualized program means tailoring to students

a. needs and capabilities.

b. only needs.

c. only capabilities.

d. only talents.

25. Learning disability child can be fully handled by

a. trained teachers.

b. untrained teachers.

c. only parents.

d. parents and teachers.

26. These children should be given modification on

a. curriculum.

b. classroom.

c. curriculum & classroom.

d. classroom only.

27. Learning disability children should be given special services by

a. government or school.

b. schools only.

c. government and school.

d. government only.

28. The teaching strategy for children with learning disability include

a. task analysis, peer teaching, cooperative learning.

b. task analysis only.

c. peer reading, teaching in specific areas.

d. cooperative learning, peer teaching.

29. Self management instruction include

a. self-monitoring, self-evaluation and self-reinforcement.

b. self-monitoring, self-evaluation.

c. self-monitoring, self-reinforcement.

d. self-monitoring only.

30. These children must be referred to

a. resource person.

b. parents only.

c. psychiatrist.

d. psychologist and resource person.

KEY

1-a,2-b,3-d,4-a,5-a,6-c,7-d,8-c,9-a,10-c,11-b,12-c,13-c,14-b,15-a,16-a,17-d,18-c,19-c,
20-c,21-c,22-d,23-a,24-a,25-a,26-c,27-c,28-a,29-a,30-d.

ATTITUDE QUESTIONNAIRE

MODIFIED THREE POINT LIKERT SCALE

Instruction: Please put tick marks in the column to place your answer

Attitude	Agree	Disagree	Not sure
1. Learning disability is common among children**.**			
2. This is a curable disease.			
3. This disability can be distinguished from other childhood disorder by a professional.			
4. A teacher does not require special skills to identify learning disability.			
5. Learning disability will lead to drop-out if not given special intervention.			
6. A teacher need not explain about learning disability to parents.			
7. A curriculum for teachers is useful for identification of children with learning disability**.**			
8. A school need not have an educational psychologist**.**			
9. Every teacher need to undergo special program on learning disability.			
10.Modified academic assignment is not required for learning disability			
11. Regular monitoring of learning disability is required.			
12. Peer sensitization is not necessary for creating awareness among children.			
13. A spot tutoring is required for learning disability.			
14. These children should not be given psycho-social supports**.**			

Attitude	Agree	Disagree	Not sure
15. Teachers must be sympathetic and avoid labeling.			
16. Learning disability children need not be given special services by government.			
17. Teachers, principal and resource teachers and team work are helpful for enhancing academic success.			
18. Children need not be regularly screened in the classroom as a method of prevention.			
19. Parents are of much help to support these children.			
20. Regular workshop need not be conducted to create awareness for teachers, parents and society.			

Key:

Attitude	Agree	Not Sure	Disagree
Positive	3	2	1
Negative	1	2	3

VEL R.S. Medical College

(College of Nursing)

Owned by R.S. Trust

(Approved by Govt. of Tamil Nadu,
Indian Nursing Council, New Delhi, Tamil Nadu Nurses & Midwives Council &
Affliated to The Tamil Nadu Dr. M.G.R. Medical University)
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Website : WWW.vel-tech.org
Phone : 26841093 Fax : 26841601

07/05/2010

To

PRINCIPAL
OCF. SCHOOL
AVADI -
CHENNAI - 54

Sub: Seeking permission for conducting main study.

Respected Sir/Madam,

This is to introduce **Mrs.ELIZABETH.K.CHACKO (Child Health Nursing) Master Degree Nursing student** of this college. She has selected the following topic for her research study to be submitted to the Tamil Nadu Dr. MGR medical university as partial fulfillment of the master degree in nursing program.

The topic for the study is, **"A Study to Asses the Effectiveness of selected nursing interventions on identification of learning disability among teachers"**

She is interested in conducting the study at your esteemed institution.

I assure you that our student will abide by the rules and regulations of the setting. I request your at most help in regard to the same.

Thanking you,

Mrs.M.Anuradha
PRINCIPAL

Permitted (15.05.10 to 15.06.10)
K.S. Kalavathy
07.05.10
PRINCIPAL
OCF SCHOOL
AVADI, CHENNAI-54.

VEL R.S. Medical College

(College of Nursing)

Owned by R.S. Trust

(Approved by Govt. of Tamil Nadu,
Indian Nursing Council, New Delhi, Tamil Nadu Nurses & Midwives Council &
Affliated to The Tamil Nadu Dr. M.G.R. Medical University)
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Website : WWW.vel-tech.org
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07/05/2010

To PRINCIPAL
KENDRIYA VIDYALAYA
OCF
AVADI
CHENNAI- 54

Sub: Seeking permission for conducting main study.

Respected Sir/Madam,

This is to introduce **Mrs.ELIZABETH.K.CHACKO (Child Health Nursing) Master Degree Nursing student** of this college. She has selected the following topic for her research study to be submitted to the Tamil Nadu Dr. MGR medical university as partial fulfillment of the master degree in nursing program.

The topic for the study is, **"A Study to Asses the Effectiveness of selected nursing interventions on identification of learning disability among teachers"**

She is interested in conducting the study at your esteemed institution.

I assure you that our student will abide by the rules and regulations of the setting. I request your at most help in regard to the same.

Thanking you,

Permitted from 15.5.10 to 15.6.10

7.5.10

Mrs.M.Anuradha
PRINCIPAL

प्राचार्य/PRINCIPAL
केन्द्रीय विद्यालय/KENDRIYA VIDYALAYA
क.व.वि.आवडि. चेन्नै-54/OCF. AVADI. CHENNAI-54

SECTION – C

CERTIFICATE OF ENGLISH EDITING

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the dissertation work **"A quasi experimental study to assess the effectiveness of selected nursing intervention on knowledge and attitude regarding identification of learning disability among teachers of selected school, Avadi, Chennai 2010-2011."** done by **Mrs.Elizabeth.K.Chacko,** II year, M.Sc.(Nursing) student of Vel R.S. Medical College - College of Nursing, Chennai, is edited for English language appropriateness by S.Freeda Rose SelvaRanie., M.A., M.Ed

P.G. Asst in English,
IHM Girls' HS School,
Avadi, Chennai

Date : 21.12.10 .

S.Freeda
Signature

Headmistress
Immaculate Heart of Mary's
Girls Higher Secondary School
Avadi, Chennai-54.

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the **Mrs.Elizabeth K. Chacko,** M.Sc. Nursing student, Vel R.S. Medical College – College of Nursing, Chennai has learned to use the standardized checklist and has developed a tool for the purpose of research under my guidance to conduct "**A quasi experimental study to assess the effectiveness of selected nursing interventions on knowledge and attitude regarding the identification of learning disability among teachers at selected schools, Avadi, Chennai**".

Amal Thomas

AMAL THOMAS, M.A. M.Phil (Clin. Psy.)
Consultant Clinical Psychologist
Reg. No. A19155

PHOTOS

LESSON PLAN ON IDENTIFICATION OF LEARNING DISABILITY

IDENTIFICATION DATA

Program	-	Health education
Topic	-	Identification of Learning disability
Group	-	Primary School Teachers from L.K.G to 5th standard
Instructor	-	Investigator
Date	-	16.05.2010
Time and Duration	-	09.00 a.m – 5.00 p.m
Place	-	Ordinance Clothing Factory School.
Method of teaching	-	Lecture cum discussion
Instructional Aid	-	Flash Card, OHP, black board, Handout & Booklet

GENERAL OBJECTIVE:

At the end of the class teachers will acquire knowledge and positive attitude in identification of children with learning disability thereby, help children to achieve their overall educational development in the future.

SPECIFIC OBJECTIVE: At the end of the class the teachers will be able to

- tell about learning disability
- understand the concepts and importance
- list the criteria for determining learning disability.
- relate the causes of learning disability
- enumerate the characteristics of learning disability
- enlist out the fact sheets of learning disability
- gain knowledge on general intervention

Sl. No.	Specific Objectives	Content	Investigator Activity	Learner's Activity	A.V. AID	Evaluation
	The teachers will be able to	**Introduction:** Good Morning Response You all have heard about the famous personalities like Albert Einstein, Thomas Alva Edison and Winston Churchill Response What do they have in common Response **PREVIOUS KNOWLEDGE** Yes you all have guessed it right. These great personalities had learning disability. The school and the teachers where they studied labelled them as good for nothing. History proved their contributions and boon to humankind. ‘‘Child is said to be the father of man’’ Education is being increasingly regarded as a fundamental right of every child, but large number of children has learning disabilities preventing them from taking full advantage of education and reaching their full				

Sl. No.	Specific Objectives	Content	Investigator Activity	Learner's Activity	A.V. AID	Evaluation
		educational and productive potential. They suffer from a group of disorders collectively known as learning disability. But unfortunately enough public awareness has not been generated and the absences of adequate educational program have for long deprived the nation of the talent latent in these children. Students with learning disabilities may be exceptionally intelligent, as illustrated by the scientific contributions of Einstein and administrative acumen Winston Churchill. And thus it is emerging issues with no special services exist to provide support to these children. And hence large number of teachers must be trained to provide remedial services to students with learning disabilities. **ANNOUNCEMENT OF THE TOPIC** Today we will see in detail about what is learning disability, its causes, characteristics and the				

Sl. No.	Specific Objectives	Content	Investigator Activity	Learner's Activity	A.V. AID	Evaluation
		general interventions.				
1.	tell about learning disability	Learning disability refers to a heterogeneous group of disorders manifested by significant difficulties in acquisition and use of listening, speaking, reading, writing, reasoning and mathematical abilities	Write the definition on black board	Listens to narration Answers few question	Black board	What is learning disability
2.	understand the concept and importance	Learning disability is emerging dynamic and expanding field Parents and teachers know child is struggling, and not able to cope with demands of their home, school, and society. And today learning disability is accepted as a condition.	Write the importance points on board	Listens and takes down the important points	Black Board	What are the concept and importance
3.	list the criteria for determining learning disability	A child does not achieve results with his or her age and ability levels in one or more of the areas. A child has a severe discrepancy of 50% or more between achievements and intellectual ability in one or more following areas • Oral expression	Explain the criteria by using OHP	Listens to explanation Taking notes	OHP	What are the criteria for determining learning ability

Sl. No.	Specific Objectives	Content	Investigator Activity	Learner's Activity	A.V. AID	Evaluation
		• Listening comprehension • Written expression. • Basic reading skills. • Reading comprehension. • Mathematical consideration. • Mathematical reasoning				
4.	discuss the causes of learning disability	**GENETIC FACTORS** Is learning disability hereditary? There is some evidence that learning disability and hyperactivity tend to run in families **GENETIC FACTORS** Is learning disability hereditary? There is some evidence that learning disability and hyperactivity tend to run in families. **PRENATAL CAUSES**	Explain the causes of learning disability	Listens explanation Taking notes	Handout	What are the causes of learning disability

Sl. No.	Specific Objectives	Content	Investigator Activity	Learner's Activity	A.V. AID	Evaluation
		• Use of drug during pregnancy • Consume excessive alcohol • Suffer from malnutrition • Suffers from rubella • Suffers from severs sickness. **PERINATAL CAUSES** • Anoxia • Injury to child's brain immediately after birth. **POSTNATAL CAUSES** Biological-Hypoglycemia, low sugar, food allergies, wheat and chocolate Developmental causes-Learning disability may cause lag in neurological development				
5.	enumerates the characteristic of learning disability	Reading behaviours Reads a letter (or) symbol inconsistently (e.g.,) read b as d, was as saw	Explain characteristic with flash card	Listens Writes	Flash card	What are the characteristic of learning disability

Sl. No.	Specific Objectives	Content	Investigator Activity	Learner's Activity	A.V. AID	Evaluation
		Has trouble following written direction Does not read fluently (or) willingly. Experience difficulty in sequencing Maths behaviours Write (or) reads number inconsistently (e) 31 as 13 6 as 9. Has directionality problems Does not understand please value. Does not grasp concepts related to numbers. Language behaviours Has difficulty writing organised sentences Dislikes (or) avoids written work Does not copy from other print correctly. Never forms /shapes of the letters. Grasps pencil or pen awkwardly.				
6.	enlist out the fact sheets	• A child with learning disability has average to above average intelligence.	Explain the facts on the roller board	Listens Writes	Roller board	What the fact sheets about learning disability

Sl. No.	Specific Objectives	Content	Investigator Activity	Learner's Activity	A.V. AID	Evaluation
		• Has nothing to do with motivation. • Life long & hidden disability. • Boys are affected more than girls. • Observation by professionals can help to observe children with learning disability.		Answer question		
7.	discuss the general intervention	• Show, demonstrate model . • Make information concrete as possible. • Test material given to the student. • Provide opportunity for continuous success. • The teacher should conduct workshop to communicate to each other novel techniques. • Involve the parents in the psycho-social support system. • Teachers must collaborate with resource teachers & parents as a team. • Teachers must be fair, firm, warm, response a sense of humour.	Explain general intervention by using hand out.	Explain Listen	Hand out	What are the general intervention

Sl. No.	Specific Objectives	Content	Investigator Activity	Learner's Activity	A.V. AID	Evaluation
		CONCLUSION Till now we have see in detail about learning disability and I believe that this valuable piece of information will help all teaches to be alert in identifying children with learning disability. And you teachers will be instrumental in producing an effective citizen for the future.				

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